Training in child and adolescent mental health for nursing, occupational therapy and social work students: does it influence career intentions?

Thesis

Training in Child and Adolescent Mental Health for Nursing, Occupational Therapy and Social Work Students: Does It Influence Career Intentions?

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Abstract

Despite increased funding in child and adolescent mental health there remains a shortage of qualified health professionals working in this area in New Zealand. This study was designed to determine whether increasing training in child and adolescent mental health would increase undergraduate nursing, occupational therapy and social work students' interest in working in the area. An additional aim of the study was to develop a sustainable teaching resource on child and adolescent mental health in CD-Rom format.

Students participating in the study were asked to complete a questionnaire before and after attending a workshop in child and adolescent mental health and again at a follow-up point, three to 16 weeks later, to establish whether or not this had influenced their stated career intentions. To assess students' and their educator's perceptions of the quality and acceptability of the workshop a quality of teaching questionnaire was administered after the workshop.

Three-hundred-and-seventy-three students participated in 14 workshops held in seven cities around New Zealand. The workshop had a positive impact on students' career intentions in relation to child and adolescent mental health. A repeated measures analysis showed an overall time effect ($F_{2,546}$ = 16.29, p = <0.0001). Further investigation of this difference was carried out using a multiple comparison test (Scheffe test) which showed a highly significant positive increase in career intentions between pre-workshop and post-workshop ratings (p = <0.0001), which dropped between post-workshop and follow-up (p = 0.004), with no change between pre-workshop and follow-up ratings (p = 0.43). There was no differential effect by students' professional group (p = 0.08), ethnicity (p = 0.6), gender (p = 0.75) or age (p = 0.26).

The study reflected similar career intention trends found in the literature. In particular, at base-line there were differences in profession-specific career intentions. Job attributes such as job satisfaction, personal interest, a job with supports available and being able to help people were also factors influencing students' career intentions. The

present study showed that a workshop on child and adolescent mental health had a significant immediate impact on undergraduate students' career intentions.

Dedication

This thesis is dedicated to my parents for instilling in me the importance of education and encouraging me to reach my academic goals.

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I would like to thank my supervisor, Dr Sally Merry. Her time, enthusiasm, insight and support were vital for the completion of this thesis. Thanks also to Elizabeth Robinson for her invaluable help with the statistical side of the project.

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List of Abbreviations

CIQ	Career Intentions Questionnaire
HOD	Head of Department/School
ID code	Identification code
QTQ-S	Quality of Teaching Questionnaire (Student Version)
QTQ-E	Quality of Teaching Questionnaire (Educator Version)
VAS	Visual Analogue Scale

Table of Contributions

Aspect of the Project/Study	***Primary Contributor(s)***	***Secondary Contributor(s)***
Development of the Workshop.	Mathijs Lucassen Sally Merry	Advisory group members, child and adolescent mental health professionals, consumer input and the independent film crew.
Development of the Questionnaires.	Mathijs Lucassen Sally Merry Elizabeth Robinson	Selected allied health professionals (including advice from Māori clinicians) and post-graduate students within the Department of Psychological Medicine.
Pilot Workshop.	Mathijs Lucassen Tania Cargo	Sally Merry.
Facilitating the Workshops.	Mathijs Lucassen Tania Cargo Sally Merry Sue Treanor Andrea Green	Not applicable.
Development of the CD-Based Teaching Resource.	Mathijs Lucassen Iain Doherty Sally Merry	Advisory group members, the film crew and Cherry Hsu (educational technologist).

Chapter One: Introduction

1.1 Overview

1.1.1 Introduction to the Study

Child and adolescent mental health services in New Zealand have historically been under-resourced (Mental Health Commission, 1999; Ministry of Health, 1997). According to the Mental Health Commission *Blueprint for Mental Health Services in New Zealand (1998)* the child and adolescent mental health area was the most dramatically deficient within the mental health sector in services and workforce. As for adults, the *Blueprint* set an access target of 3% of the population under 20 years over six months (Mental Health Commission, 1998, 2001, 2004). As a result of this access target there has been a considerable increase in funding for child and adolescent mental health services (Mental Health Commission, 2001, 2004). However despite this increase in funding, progress toward *Blueprint* guidelines has been slow, and only 1.1% of those under 20 years of age in New Zealand were reported to have been seen by mental health services in the first six months of 2003 (Mental Health Commission, 2004). This slow progress is concerning, and staffing issues in child and adolescent mental health services demand attention. The lack of progress in the area is compounded by the failure of many District Health Boards to fill their vacant positions (Mental Health Commission, 2004). Staffing was a particular problem in the Northern Region of the country where 22% of the District Health Board funded community child and adolescent mental health positions were reported vacant as at 30th June 2003 (Mental Health Commission, 2004).

The staff that make-up the current child and adolescent mental health workforce come from a diverse range of professional backgrounds, and include psychologists, social workers, nurses, medical practitioners, psychotherapists, occupational therapists and others (Khin, 2002). These professionals work in multi-disciplinary teams and their numbers (Khin, 2002) and composition (Lambie & Stewart, 2003) vary considerably across regions and teams. If the current workforce shortages remain they will continue

to create a considerable barrier to achieving improved services. Hence, the sector needs many more skilled health professionals in order to facilitate an improvement in the delivery of services in child and adolescent mental health.

The Werry Centre was established in 2002 within the Department of Psychiatry, at the University of Auckland as a result of the workforce issues identified by the Mental Health Commission. The aim of the Werry Centre is to improve the mental health of children and adolescents in New Zealand by: providing or facilitating first-class training and support to the workforce nationally, promoting high quality research into child and youth mental health, advocating for the mental health needs of children and adolescents, and supporting the child and adolescent mental health workforce to provide high quality care. The Werry Centre has a national focus and is multidisciplinary, multicultural and is run in accordance with the Treaty of Waitangi.

Career-choice and attitudes to certain practice areas/specialities will inevitably impact on the health-care workforce and its development. This is especially significant for areas such as child and adolescent mental health that struggle to recruit and retain suitably qualified staff. What is not yet known is how people can be encouraged to consider child and adolescent mental health as a career choice. Related studies conducted in the area of vocational psychology have shown that personal interest is strongly predictive of job choice and satisfaction (Dawis & Lofquist, 1984; Holland, 1997; Lofquist & Dawis, 1991; Rounds & Tracey, 1990; Tracey & Hopkins, 2001). However, other experts in the field suggest that job attributes such as the nature of the work, advancement opportunities, work location, and the industry also have a strong and consistent impact on job choices (Boswell, Roehling, LePine, & Moynihan, 2003; Taylor & Bergmann, 1987). Despite these findings in vocational psychology, it is difficult to generalise this research as these factors have not been systematically studied in relation to undergraduate healthcare professionals.

The specialist child and adolescent mental health workforce[1] in New Zealand primarily comprises nurses, occupational therapists, social workers, psychologists, psychiatrists and psychotherapists. This study focuses on nurses, occupational therapists and social workers because a previous study identified that, despite working in a range of child and adolescent mental health services, these professionals receive minimal training in

[1] Those services targeted to access 3% of the child and adolescent population as outlined in the *Blueprint.*

child and adolescent mental health at undergraduate level (Peters, 2003). In comparison, psychiatrists and child psychotherapists receive considerable training in this area. Psychologists also receive specialised training in the area of child and adolescent mental health, but this is thought to be inadequate (Lambie & Stewart, 2003). Fortunately, the key stakeholders consulted in Peters (2003) study expressed an interest in increasing child and adolescent mental health training and it was suggested that this increased training had the potential not only to increase students' theoretical knowledge, but also to encourage people to work in child and adolescent mental health. It was postulated that by providing teaching in the area of child and adolescent mental health, the career intentions of nursing, occupational therapy and social work students may be positively influenced and that there was potential to make a contribution to reducing the workforce shortage.

1.2 Literature Search

1.2.1 Search Strategy

Several databases were searched to obtain articles in the area of career intentions, career choice and undergraduate health students. These were: Educational Resources Information Centre (ERIC, 1966 to March Week 2 2004), Allied and Complementary Medicine (AMED, 1985 to March Week 2 2004), MEDLINE (1966 to March Week 2 2004), PsycINFO (1872 to March Week 2 2004), Digital Dissertation (1980 to March Week 2 2004), and the Cumulative Index to Nursing and Allied Health Literature (CINAHL, 1982 to March Week 2 2004).

Key search terms used were: career choice or job choice and health students or nurse or nurses or nursing or allied health occupations or occupational therapy or social work or social worker. Further studies or publications were obtained by searching the bibliographies of publications cited in the current study and searching for relevant publications on child and adolescent mental health from the Ministry of Health (www.moh.govt.nz/publication), the Mental Health Commission (www.mhc.govt.nz/pages/publications.htm), and the Werry Centre (www.werrycentre.org.nz/?t=33) websites. This search identified a total of 516 articles.

1.2.2 Selection Criteria

Each identified publication was assessed for possible inclusion in the study (the research-based articles are summarised in the Table 1). Publications that were recently published (1985 to 2004) in English, were research-based, and focused on factors that are thought to influence health professionals and their career intentions were included in this study. All studies on nursing, occupational therapy and social work career intentions were included, irrespective of their potential methodological weaknesses, because there is so little research in this area.

1.2.3 Quality of Studies

Fifty-three relevant studies were selected for inclusion in this study and these are summarised in Table 1. In the vast majority of the referenced studies the researchers developed their own questionnaires and they provided little or no detail about the reliability or validity of these tools[2]. Corrigan, River, Lundin, Penn et al., (2001), Penny (2001), Procter & Hafner (1991) and Tracey & Hopkins (2001) were exceptions to this trend as they used established questionnaires with evidence of validity and reliability; however the tools used did not measure health professionals' career intentions. A large number of cited studies only used participants from one setting or educational institution[3]. Approximately a third of studies measured career intentions at more than one point in time[4]. Nearly half of the studies had less than a hundred participants[5] with nine studies involving more than 500 participants[6].

[2] Articles marked with * in Table 1 denote studies that provided little or no detail about the validity or reliability of the questionnaires.
[3] Articles marked with # in Table 1 denote that participants were from one educational institution only.
[4] Articles marked with ^ in Table 1 denote studies that measured career intentions at more than one point in time.
[5] Articles marked with - in Table 1 denote studies with less than 100 participants.
[6] Articles marked with + in Table 1 denote studies with more than 500 participants.

Table 1: Summary of Studies Identified in the Literature Review

(Please refer to page 4 for a legend of symbols used in this table).

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
* # ^ Alford et al. (USA) 2001	First year medical students from the same institution (N = 203).	Participants were surveyed using a questionnaire developed by the authors before and after teaching on geriatric medicine. The study had a comparison group of non-intervention students. No details on the questionnaire's validity or reliability.	Although awareness of geriatrics and comfort with older people increased, there was little change in career intentions.	Only conducted in one institution. No evidence to support use of the questionnaire.
* + Bailey (USA) 1990	Occupational therapists not working in OT roles (N = 696).	Participants completed a questionnaire (developed by the author) to ascertain their reasons for leaving the field. Surveys were sent to 1,563 participants and 940 (60%) were returned, 696 (45%) which were 'unusable'.	Family responsibilities main reason for planning not to return to OT.	Possible sampling bias - participants had to have completed a previous questionnaire.
* # ^ Boswell et al. (USA) 2003	Graduating students from four colleges within the same institution (N = 185).	Participants completed a survey (14 factors using a seven-point Likert-Scale) and were interviewed once they received a job offer and after an offer had been accepted.	Job attributes (e.g., salary, working conditions) strongly shape job-choice decisions.	Possible retrospective bias as reported job acceptance/rejection in hindsight.
* # ^ - Boughn (USA) 2001	Undergraduate nursing students at one educational institution (N = 28).	Female participants (N = 16) were matched with the male participants (N = 12) and interviewed over a two year period employing a grounded theory approach.	Women are socialised to think of others before they think of themselves, this is especially true in nursing.	Small scale study in one institution.
* Brown (Canada) 1998	Male occupational therapists in Canada who were members of their professional association (N = 199).	Participants completed a postal survey developed by the author about demographic and work-related data. Of the 199 surveys sent, 165 (83%) were completed.	Occupational therapy is a female-dominated profession. Limited earning potential, lack of advancement seen as negative factors.	Possible sampling bias, unclear what % of males not members of their professional association.
* Christie et al. (USA) 1985	Occupational therapists selected via fieldwork sites (N = 131).	Participants completed a questionnaire, developed by the authors, to retrospectively establish stages of training and influences on participants' career intentions. No details provided regarding the validity and reliability of this tool.	Placements have the greatest impact on career intentions.	Not clear if this is a representative sample. Retrospective bias (reporting experiences from before-qualifying).
# Corrigan et al. (USA) 2001	Adults enrolled at a community college in Chicago (N = 152).	Participants were randomly assigned to one of four stigma-changing exposures. Participants completed the Psychiatric Disability Attribution Questionnaire (which has some evidence of test-retest reliability and concurrent validity) before and after the exposure as well as a 'Life Story Memory Test' (no details provided regarding the validity and reliability of this tool).	Results suggest that education about mental health can lead to a positive attitude change.	No details on the selection criteria or type of students involved in the study.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
* # Craik et al. (UK) 2001	Undergraduate occupational therapy students at one educational institution (N = 330).	Participants were surveyed in the first term of their study, using a questionnaire developed by the author (no details provided regarding the validity and reliability of this tool).	Increasing number of students entering the programme from minority ethnic groups. Participants wanted to be OT's in order to 'help people'.	Increasing ethnic diversity probably to do with location (West London). Large sample.
* # ^ - Doyle et al. (USA) 1998	Undergraduate occupational therapy students from the same institution (N = 24).	Participants were surveyed pre-admission, at completion of Year I and at completion of Year II. The survey used was adapted from Sexton, Madigan & Cash (1994). It included a survey of practice area preferences and two open-ended questions (factors influencing practice area preference). Reliability and validity studies have not been performed on the questionnaires.	Students changed practice area preference whilst training.	Small scale study in one institution.
* - Faleafã (NZ) 2003	Pacific psychologists in NZ (N = 13).	Participants were interviewed by the author using a structured interview format. The data was analysed using thematic analysis.	More training in child and adolescent mental health would have attracted participants to the area. The dominant theme that emerged was a need for Pacific cultural training in psychology programmes.	Qualitative study, however probably almost the entire population of Pacific psychologists in NZ. NZ based study.
* # - Ferguson (UK) 1998	Undergraduate nursing students from the same institution (N = 20).	Participants were interviewed using a semi-structured format after selecting their branch type. Ten 'mental health branch' and ten 'adult branch' nursing students were interviewed.	Students were strongly influenced by positive mental health placements (in relation to the work itself, to staff attitudes and the ward atmosphere).	Small scale study in one institution.
* # - Fleming et al. (Australia) 1997	Undergraduate occupational therapy students at one educational institution (N = 83).	Participants completed a questionnaire on the first day of their training (demographic details, what makes a successful OT, why they chose OT and expectations of their course and career). Questionnaire developed within the educational institution, no details provided regarding the validity and reliability of this tool.	Paediatrics and working in physical rehabilitation popular. Psychiatry and working in rural areas held in 'low esteem'. Student body homogeneous (young, 'middle-class' & female).	Study in one institution.
* + Happell (Australia) 1998a	Undergraduate nursing students from several educational institutions in Victoria (N = 793).	Participants completed a career intentions questionnaire in the first semester of their training. The questionnaire was a modified version of Stevens and Dulhunty's questionnaire. Reliability and validity studies have not been performed on the questionnaires.	Students entering their nursing training do not rate working in mental health favourably.	This study represents a large number of nursing students, but only as they begin their training.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
Happell (Australia) 1998b	12 nursing programmes in Victoria, Australia.	The author reviewed the mental health content of comprehensive nursing programmes in one Australian state after the introduction of comprehensive training.	Psychiatric nursing constitutes a small proportion of the curricula and the amount of content varies between educational institutions.	No details on how the curriculum review data was gathered or analysed.
- Happell (Australia) 1998c	Undergraduate nursing students from the same institution (N = 93).	Participants completed an evaluation (developed by the author) at the end of their mental health teaching. 68 (73%) participants completed the evaluation which aimed to also establish whether or not it had a positive impact upon their career intentions.	Students were more positive after teaching about people with mental health issues and were more positive about working in the area.	Students were only evaluated after the exposure.
Happell (Australia) 1998d	The Happell (1998a) study published in another journal.	As in Happell 1998a.	As in Happell 1998a.	As in Happell 1998a.
Happell (Australia) 1999a	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Students placed little emphasis on the psychosocial aspects of critical care nursing.	As in Happell 1998a.
Happell (Australia) 1999b	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Working with the elderly rated unfavourably.	As in Happell 1998a.
Happell (Australia) 1999c	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Students prefer 'curing' over 'caring'.	As in Happell 1998a.
Happell (Australia) 1999d	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Negative mental health placements are thought to negatively influence career intentions in the area of psychiatry.	As in Happell 1998a.
* # ^ - Happell & Rushworth (Australia) 1999	Undergraduate nursing students from one educational institution divided into two groups exposure (N = 30) and comparison (N = 27).	Participants completed a career intentions questionnaire in the first semester of their training and after block teaching in mental health or long-term illness and aged care in their second year of training. The questionnaire was a modified version of Stevens and Dulhunty's questionnaire.	Education may positively influence students' career intentions in relation to mental health.	Small study with a comparison group, utilises previously used survey. Questionnaire completed immediately after teaching.
Happell & Rushworth (Australia) 2000	The Happell & Rushworth (1999) study published in another journal.	As in Happell 1999.	As in Happell 1999.	As in Happell 1999.
Happell (Australia) 2000b	The Happell & Rushworth (1999) study published in another journal.	As in Happell 1999.	As in Happell 1999.	As in Happell 1999.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
Happell (Australia) 2000c	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Students rate working in perioperative nursing favourably at the start of their training.	As in Happell 1998a
* ^ + Happell (Australia) 2001	Follow-up of the Happell (1998a) study. The same student nurses at the end of their training (N = 521).	Participants completed a career intentions questionnaire at the start of their training (Happell, 1998a) and upon course completion using a modified version of Stevens and Dulhunty's questionnaire.	Medical-surgical nursing most popular area. Psychiatric nursing became more popular, but still ranked lowly.	Large sample, over duration of course.
Happell (Australia) 2002a	The Happell (2001) study published in another journal.	Same comments as above.	Same comments as above	Same comments as above
Happell B M (Australia) 2000	The Happell (1998a) study published in another journal.	As in Happell 1998a.	Student nurses tend to hold a 'romantic, naïve view' about working with children.	As in Happell 1998a
* - Hemopo (NZ) 2004	Māori psychologists (N = 16) and intern psychologists (N = 4)	Participants completed the questionnaire developed by Lambie and Stewart (2003), questions specific to Māori respondents were developed by a Māori psychologist and the data was analysed by a Māori intern psychologist.	Half of those not working in the area stated more training in child and adolescent mental health would have attracted them to the area. Participants 'clearly and strongly' identified that cultural workforce development initiatives were needed to attract more Māori psychologist to the area.	Small sample size but is representative of the small number of Māori psychologists in NZ.
* + Lambie & Stewart (NZ) 2003	All registered psychologists (N = 1470), intern clinical and educational psychologists (N = 55), training programmes (N = 8) and psychology advisors at DHBs (N = 12).	445 (30% response rate) registered psychologists, 22 interns (40%), all training programmes (100%) and 6 (50%) of psychology advisors replied to the questionnaire sent by the authors. The questionnaire aimed to investigate: the number of psychologists in child and adolescent mental health services, their training experiences and current training needs, and the recruitment and retention issues they faced. The questionnaires were developed by the authors (no details provided regarding the validity and reliability of this tool).	Early exposure to training in child and adolescent mental health increases the likelihood of entering employment in the area. Internships and other training late in pre-qualification strongly related to working in the area of child and adolescent mental health.	Large scale study. Retrospective views of training. Much higher rates (59%) from child and adolescent psychologists. NZ-based study.
* # ^ - Lewicki Et al. (USA) 1999	Occupational therapy students at one educational institution (N = 20).	Participants completed questionnaires at six points in time, from starting their course until after they had graduated. Reliability and validity studies have not been performed on these questionnaires.	Practice area preference remains generally stable. Mental health less popular than working with those that have physical disabilities.	Small sample from one university.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
+ McGhee (USA) 1987	Medical graduates graduating from American medical school in 1985 (N = 11 048).	The author used the Association of American Medical Colleges Medical Student Graduation Questionnaire to investigate factors associated with the selection of psychiatry as a medical speciality (Unpublished doctoral thesis).	Psychiatry elective was the most powerful individual predictor of intentions to work in psychiatry.	Large scale study. But appraisal of research not possible (unpublished study).
* # - McKenna et al. (Australia) 2001	Undergraduate occupational therapy students from the same institution (N = 84).	Participants were surveyed on the first and last day of their training. This included surveying them about factors that would influence their career plans (factors conceptualised by the authors) and they rated these factors using a four-point Likert-Scale.	Clinical placements and particular clinicians were identified as having the greatest impact on students' career plans, this did not equate with increased interest in mental health or research.	Students all from one institution.
* Muldoon & Reilly (UK) 2003	Undergraduate nursing students in Northern Ireland (N = 384).	Participants were in their first year of study. The study aimed to measure participants' career aspirations and the perceived gendered nature of a number of career options. No details provided regarding the psychometric properties of the questionnaires used (The Bem Sex Role Inventory or the Occupational Self-Efficacy Scale).	Mental health and learning disability nursing were perceived to be the most appropriate areas for male nurses.	Large number of students, limited details provided regarding the questionnaires.
* # ^ - Ohman et al. (Canada) 2002	Undergraduate physiotherapy students at one educational institution in Canada (N = 60).	Participants completed the questionnaire (developed by the author) at two points in time, one at the beginning and one toward the end of their studies. 40 (67%) students completed both questionnaires.	Influences during training meant that students changed their career intentions slightly during the educational programme.	Students all from one institution.
* ^ Ohman et al. (Sweden) 2001	Undergraduate physiotherapy students at seven institutions in Sweden (N = 273).	Participants completed the questionnaire (developed by the author) at two points in time, one at the beginning and one toward the end of their studies. 187 (69%) students completed both questionnaires.	Differences between what participants want from a career in physiotherapy and the realities of working in the field.	Large number of students, limited details provided regarding the questionnaires.
+ Ozawa & Law (USA) 1993	Social workers in the mid-career years (N = 30) compared to four other groups (N = 518).	The authors used data from the 1982 New Beneficiary Survey to compare salaries of a representative sample of social workers, nurses and teachers (female dominated professions) and compare their earnings to lawyers and doctors (male dominated professions).	Social workers' earning capacity consistently lagged far behind that of the two male dominated professions.	Use of representative sample.
# - Penny (USA) 2001	Undergraduate occupational therapy students at one educational institution (N = 36).	Participants were surveyed seven times over three years (from starting their training to after graduating) about their attitudes toward people with physical disabilities and mental illness. Two questionnaires (The Attitude Toward Disabled People Scale-Form A (ATDP-A) and The Opinions About Mental Illness Scale (OMI)) were used to measure this. Limited details provided regarding the ATDP-A's validity and reliability, however the OMI has good psychometric properties.	At the end of their training participants' attitudes toward the mentally ill were more favourable than at the start of their course, but less so than toward those with physical disabilities. Favourable attitudes towards people with mental illness did not appear to be predictive of employment in a mental health setting.	Small sample from one educational institution. Standardised questionnaire used, however did not measure actual career intentions, but attitudes toward mental illness.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
* - Peters (NZ) 2003	Health educators and professionals from various institutions throughout NZ (N = 42).	Participants were interviewed regarding the child and adolescent mental health content of various courses. This included interviewing stake-holders in nursing, occupational therapy and social work.	Very few training programmes include child and adolescent mental health in their curriculum.	NZ-based study. Limited details on how the curriculum review data was gathered or analysed.
* # Philipps et al. (USA) 1997	Undergraduate occupational therapy students at one educational institution and applicants to this programme (N = 229).	Participants were applicants to this programme in 1994 (N = 130) and 1995 (N = 99). They were surveyed about their career intentions prior to entrance into the training programme. The questionnaire was based on the Practice Area Preference Survey (no details provided regarding the validity and reliability of this tool).	Working in mental health was less popular than working with people who have a physical disability.	Students all from one institution.
# ^ - Procter & Hafner (Australia) 1991	Undergraduate nursing students from the same institution (N = 51).	Participants completed the Wilson-Patterson Conservatism Scale a self-report measure of conservatism (this tool has been subjected to 'rigorous psychometric evaluation'), the Attitudes to Treatment Questionnaire (comprises 19 statements about psychiatric nursing), the Defence Style Questionnaire (measures psychological defence mechanisms on three scales) and an open-ended questionnaire developed by the authors (no details provided regarding the validity and reliability of these three tools). Questionnaires were administered before and after block teaching and an in-patient placement in mental health.	The most obvious benefits of the placement were a reduction in fear and prejudice concerning the mentally ill, and the development of more informed and compassionate attitudes towards them.	Use of established questionnaire. Students all from one institution.
* # - Pye & Whyte (UK) 1996	Undergraduate nursing students from the same institution (N = 34).	Participants completed a questionnaire at the completion of the common foundation programme. The questionnaire was based on a check-list developed by Bell (1989) (no details given) and modified by the authors. Semi-structured interviews were also utilised to establish why participants had chosen a particular branch specialism.	A speculative model was generated which identified some factors which may influence a student's decision to change or not change their branch choice (such as gender, age, placement experiences, learning styles and career prospects).	Small scale study, students from one institution.
Robinson & Murrells (UK) 1998	Recently qualified mental health nurses from various institutions in England (N = 447).	Participants were surveyed upon qualifying about whether they had been given career guidance. The questionnaire was specifically developed for the study.	A minority received career guidance, but the majority would have liked to have had it.	Unclear if this is a representative sample of nurses in the UK. Possible retrospective bias.
* # Schnuth et al. (USA) 2003	Medical students from the same institution across the first four years (N = 205).	Participants completed a web-based survey (developed by the authors) at one point in time. The survey included questions regarding: demographic details, career intentions and factors influencing intentions to work in obstetrics and gynaecology.	Students changed practice area preference whilst training for reasons that were not clear. Gender predictive of working in obstetrics and gynaecology.	Students from one institution.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
* Showers (USA) 1992	Social work students from eight educational institutions on hospital based placements (N = 238).	Participants completed two questionnaires (developed by the author) after their placement. The survey included questions regarding: demographic details, ratings of placement satisfaction and the extent to which 50 aspects of placement teaching were present.	That student placement satisfaction in hospitals is positively correlated with willingness to accept employment for social work students.	No details regarding the validity or reliability of the questionnaire.
- Smith (USA) 1999	Social work students (N = 49).	The author surveyed participants using a self-report questionnaire which contained questions inquiring about various traumatic experiences that may have occurred in the participants' households. No further details are available (unpublished Master of Social Work thesis).	Life experiences were correlated to desired career choice in several instances, and the majority of participants noted that their interest in entering social work was due to personal experience.	Small sample size, further appraisal not possible (unpublished thesis).
* ^ + Stevens & Dulhunty (Australia) 1992 & 1997	Undergraduate nursing students at five universities (N = 610). 26% of questionnaires could be matched over the three stages (N = 156).	Participants were surveyed at three points in time (on commencement day, mid-way through their training and just before completion of their course). A convenience sample of these participants was selected for interviewing (N = 12). The questionnaire was developed by the authors and involved ranking ten areas of nursing practice in order of preference and a series of open-ended questions asking for reasons for the their choices.	Attitudes towards the mentally ill improve throughout the duration of the pre-registration programme; however, this change does not translate into increased desire to work in the area.	Large sample, from five institutions and career intentions measured at three points in time. Problems with attrition.
* ^ + Taylor & Bergmann (USA) 1987	Random sample of college graduates applying to work at a large firm (N = 910).	Participants were surveyed at five points in time (campus interview to job offer decision) to assess the impact of recruitment activities. The questionnaires had all been used in previous related studies (however few details provided regarding their reliability and validity).	Job attributes (location, salary and title) shown to have a strong and significant impact, and more so than recruitment activities.	Low participation rates at the later stages of the study, 73% at stage one to 26% at stage five.
+ Tracey & Hopkins (USA) 2001	High school seniors from a nationally representative sample of 49 schools (N = 4,679).	Participants completed interest and ability profiles, using the Inventory of Work-Relevant Abilities (IWRA) and Unisex Edition of the ACT Interest Inventory (UNIACT). There is support for the psychometric properties of both tools.	Study concluded that interests are a major determinant of career selection and subsequent satisfaction.	Large scale study, representative sample, well established tools used.
* # - van Heugten & Rathgen (NZ) 2003	Social work graduates from one educational institution (N = 12).	Participants were graduates who had been in practice for one year took part in a semi-structured interview to discuss their experiences of transitioning from studentship to professional social worker.	Regret was expressed that subjects were not taught to the level of specialist knowledge that some participants required in their place of work (particularly if they worked in mental health). Those respondents who had had positive placement opportunities in specialist areas found that this had done much to enhance their specialist assessment and intervention skills.	NZ-based study, small scale study in one institution.

Authors (Location & Year)	Description of Participants	Method	Main Findings	Comment
* - Wells et al. (Ireland) 2000	Secondary school students (N = 15) from one school, degree-level social care students (N = 15) and psychiatric nursing students (N = 26).	Participants took part in semi-structured interviews to discuss their perceptions of a career in psychiatric nursing.	Poor career guidance emerged as a theme for participants. Negative views held by participants about psychiatric nursing. Issues around a lack of career paths for social care and nursing students.	Small scale study.
# - Werrbach & DePoy (USA) 1993	Bachelor or Master of Social Work students at one educational institution (N = 90).	Participants were surveyed about working in mental health at one point in time. Questionnaire developed within the educational institution, no details provided regarding the validity and reliability of this tool.	Student social workers indicated positive perceptions about working in mental health.	Students from one institution, limited details provided about the questionnaire.
# ^ - White (UK) 1999	Nursing students from one educational institution (N = 42).	Participants were surveyed using a questionnaire developed by the author at the end of their course, followed two months later by two focus group discussions (using the same students). The questionnaire consisted of close-ended items, Likert-scales, rankings and fixed response questions.	The problem of recruiting nurses to some specialist areas is going to continue and managers should consider offer additional incentives such as rotational schemes, professional development opportunities and clinical supervision.	Students from one institution, limited details provided about the questionnaire.
Wittman et al. (USA) 1989	A random sample of 450 occupational therapists who graduated in 1986, of which 47% participated (N = 212).	Participants returned postal surveys that were developed by the authors. The surveys used Likert scales to retrospectively identify influences on career intentions at key points in time.	Participants viewed themselves as generalists who could be happy and satisfied working in any of several different areas.	Retrospective bias.

1.3 Influences on Job Choices within Healthcare

Based on this body of research training experiences do appear to have the ability to influence career intentions (Alford et al., 2001; Christie, Joyce, & Moeller, 1985; Faleafã, 2003; Ferguson, 1998; Hemopo, 2004; Lambie & Stewart, 2003; McGhee, 1987; Pye & Whyte, 1996; Showers, 1992; van Heugten & Rathgen, 2003). Numerous other factors also appear to influence career intentions and ultimately job choice and these include: gender (Bailey, 1990; Boughn, 2001; Brown, 1998; Muldoon & Reilly, 2003; Pollard & Walsh, 2000; Pye & Whyte, 1996), profession-specific preferences (Craik et al., 2001; Fleming et al., 1997; Happell, 1998a, 2001, 2002a; Lewicki et al., 1999; Ohman et al., 2002; Ohman et al., 2001; Philipps et al., 1997; Pye & Whyte, 1996; Smith, 1999; Stevens & Dulhunty, 1992, 1997; Wells, Ryan, & McElwee, 2000; White, 1999; Wittman et al., 1989) and the stigma associated with mental illness (Corrigan, River, Lundin, Penn et al., 2001; Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Happell, 1998b; Happell & Rushworth, 1999, 2000; Procter & Hafner, 1991; Werrbach & DePoy, 1993). Studies are contradictory in that some highlight the relevance of class-room experiences and their impact on career intentions and others suggest that clinical experiences are far more influential. Moreover, methodological problems in this body of research mean that studies are of varying quality and this limits the conclusions that can be drawn.

Although previous research is not extensive, some theorists suggest that job choice should be seen as a dynamic decision making process, in which people move through various decision-making stages (Boswell et al., 2003). These theorists suggest that job choices should not be conceptualised as one specific action taken at one point in time, but rather as a process which is on-going over time (Ohman et al., 2001). Not surprisingly, health students' career intentions are thought to change over the duration of their training (Doyle at al., 1998; Ohman et al., 2002; Schnuth et al., 2003). The majority of related studies have investigated the influence of classroom and clinical placement experiences on career intentions. The results of these studies suggest that the combined effects of classroom and clinical experience can influence health students' career intentions (Alford et al., 2001; Christie et al., 1985; Faleafã, 2003; Ferguson, 1998; Hemopo, 2004; Lambie & Stewart, 2003; McGhee, 1987; Pye & Whyte, 1996;

Showers, 1992; van Heugten & Rathgen, 2003). The stigma associated with mental illness (Corrigan et al., 2001; Crisp et al., 2000; Happell, 1998b; Happell & Rushworth, 1999, 2000; Procter & Hafner, 1991; Werrbach & DePoy, 1993) and gender issues (Bailey, 1990; Boughn, 2001; Brown, 1998; Muldoon & Reilly, 2003; Pollard & Walsh, 2000; Pye & Whyte, 1996) are also thought to influence career intentions to some degree. Each of the above mentioned issues and the related research will be discussed in detail. Factors associated with the profession-specific career intentions of nurses, occupational therapists and social workers will also be discussed separately because these trends may impact on students' career intentions toward child and adolescent mental health.

1.4 Factors Associated with Career Intentions

1.4.1 Classroom experiences and their influence

Two Australian experts, Brenda Happell and Louise Rushworth, found that nursing education and educators can positively influence students' opinions of psychiatric nursing (Happell & Rushworth, 1999). Preliminary results from their small-scale study (N = 57) suggest that exposure to the theory of psychiatric nursing may contribute to the facilitation of "more positive attitudes amongst undergraduate nursing students toward psychiatric nursing as a future career option" (Happell & Rushworth, 1999, p. 9). Steven and Dulhunty (1997) surveyed over 600 nursing students at five universities in Australia at three points in time during students' training. Unlike Happell, they found that an improved attitude toward mental ill-health did not reliably increase the likelihood that students would desire a career in psychiatric nursing.

The above mentioned studies pertain to nursing students. Within occupational therapy there is less research, but the results are more consistent. Doyle and colleagues (1998) surveyed 24 undergraduate occupational therapy students from one institution at three points throughout their training and found that "students may change practice area preferences throughout their education as academic factors influence them in positive or negative ways to consider alternative practice areas" (Doyle et al., 1998, p. 1). Individual lecturers also appear to influence occupational therapy students' career intentions. Lecturers who are experienced in clinical work, well prepared for class, present material in a stimulating and enthusiastic manner, are open to student input, and employ teaching methods that emphasise clinical applications of theory are likely to

positively influence students' practice area preferences (Christie et al., 1985; Lewicki et al., 1999; Wittman et al., 1989). In summary, occupational therapy educators as role-models are thought to have a direct influence on practice area choice and experiences whilst in the classroom seem to have a profound effect on career choice. Worryingly, very few nursing, occupational therapy and social work educators have child and adolescent mental health experience (Peters, 2003) and this means that there are few educators who can act as role-models to promote this area to students.

Christie and colleagues (1985) concluded that inadequate theoretical preparation in specific clinical areas made some participants decide against practicing in those areas because of feelings of insecurity and inadequacy. In New Zealand, Lambie and Stewart (2003) also found that there was a relationship between trainee psychologists' perceived competence in a practice area and career intentions. For example, 19% of psychologists reported they would have been very likely to have worked in child and adolescent mental health if they had received better training.

Alford and colleagues (2001) found that a more favourable perspective toward the elderly in medical students did not equate to an increased interest in working in geriatrics. Their study assessed the impact of a six-session teaching package on geriatric health for 203 first year medical students and a comparison group of non-intervention students in the United States. Each of the six sessions involved an hour long lecture, a visit to a 'relatively healthy' older volunteer and a response to reflection questions on the course website. Upon completing the course students' knowledge in the area increased and they also developed a more positive outlook toward older people (Alford et al., 2001). However, consistent with Stevens and Dulhunty (1997), a more positive outlook toward a certain clinical population did not necessarily equate to a desire to work with that client group. Alford et al. (2001) concluded that medical students would rather cure acute illnesses than manage chronic health problems.

1.4.2 Placement experiences and their influence

Clinical placement experiences also influence career intentions. Ferguson (1998) surveyed 20 undergraduate nursing students in the United Kingdom. Students appeared to have been "strongly influenced by positive experiences in mental health placements, both in relation to the work itself and to the attitudes of ward staff and the general atmosphere" (p.410). Therefore, it would seem that clinical experience in the

psychiatric field is an important influence on career intentions (Ferguson, 1998; Pye & Whyte, 1996).

In Australia, McKenna et al. (2001) surveyed occupational therapy students from the same institution on the first day of their training in 1994 and subsequently on the last day of the course in 1997. Fifty-nine students completed the survey on the last day of their course and were asked to rate the importance of ten influences in relation to their career decisions. Most students, 95% and 87%, respectively rated clinical placements and particular clinicians as important influences (McKenna et al., 2001). Job availability, particular clients and university staff were rated by approximately 70% of students as being of importance to their career decisions (McKenna et al., 2001).

Showers (1992) surveyed 238 social work students regarding their placement experiences in 27 hospitals in the United States of America. She developed her own survey specifically for this study which included demographic questions, placement satisfaction ratings and the extent to which 50 aspects of placement teaching were present. Showers found that students' satisfaction with their field work affected their willingness to accept employment in their host hospitals. She then suggested that social work managers and field work supervisors could positively influence students' career intentions towards working in hospital settings by enhancing placement experiences. However this suggestion has not been followed-up in the published literature. There are no New Zealand studies specifically relating to social work students' career intentions. The most closely related research was conducted by researchers at Canterbury University, where van Heugten and Rathgen (2003) interviewed twelve recent graduates in social work. They found that respondents who reported positive placement opportunities in particular specialist areas also identified these areas as those in which their specialist assessment and intervention skills had been most enhanced (van Heugten & Rathgen, 2003). In other words, their positive placement experiences in specialist areas meant that they gained professionally from the placement.

McGhee (1987) surveyed 11,048 of the 16,318 medical school graduates in the United States of America in 1985. Of the respondents, 532 (or 4.8%) either planned to specialise in psychiatry or child psychiatry or, if undecided, listed these as their first choice (McGhee, 1987). McGhee concluded that participation in a psychiatry elective or clinical placement was the most powerful individual predictor of career intentions by

a considerable margin (McGhee, 1987). Perhaps, McGhee's findings are not surprising as the results of his study are confounded by the fact that students' elective placement choices were likely to have been based on pre-existing interests.

1.4.3 The stigma of mental illnesses – Does this influence career intentions?

Negative opinions about mental disorders were prevalent in a sample of 1,737 adults deemed to be representative of the population of Great Britain when they were surveyed about seven types of common mental health disorders (Crisp et al., 2000). The most commonly held negative opinion was that people with psychiatric disorders are dangerous and unpredictable. This view was held most often about those with schizophrenia, alcoholism and drug dependence (Crisp et al., 2000). In the United States a study by Corrigan and colleagues (2001) showed that it is possible to change the attitudes of a group of people in relation to mental ill-health. One hundred and fifty two community college students participated in a brief course on mental illness and this lead to improved attitudes about persons with psychiatric disabilities (Corrigan et al., 2001).

Unfortunately, a negative attitude toward mental illness is prevalent among many health care students in nursing, occupational therapy and medicine (Penny, 2001; Peters, 2003; Philipps et al., 1997). This is not surprising as health care students are likely to hold views about the mentally ill that reflect those of broader society (Stevens & Dulhunty, 1992). Despite this, Procter and Hafner (1991) found that a brief student placement in a psychiatric hospital can result in a reduction in fear and prejudice concerning those who are mentally ill, and the development of more informed and compassionate attitudes toward them. Conversely, Stevens and Dulhunty (1997) found negative clinical experience to be the most common reason for ranking psychiatric nursing as the least preferred option.

The design of most previous studies did not address the relationship between attitudes towards the mentally ill and the popularity of working in the field of mental health (Happell, 2000). In one exception, attitudes towards those with a mental illness were found to improve throughout the duration of the pre-registration nursing programme in Australia. However, as noted earlier, this change did not translate into increased desire to make a career in this area of nursing practice (Stevens & Dulhunty, 1997).

1.4.4 Gender and its influence on career intentions

Nursing (Muldoon & Reilly, 2003), occupational therapy (Brown, 1998), and social work (Ozawa & Law, 1993) are female-dominated professions. This is noteworthy as gender is thought to influence career intentions. For example, nursing has traditionally been viewed as an appropriate occupation for women and areas such as midwifery, paediatric nursing and care of older people tend to be regarded as largely female domains (Muldoon & Reilly, 2003). Conversely, critical care, psychiatric nursing and teaching tend to be viewed as appropriate for both men and women (Muldoon & Reilly, 2003). Muldoon & Reilly's (2003) findings suggest that working with children is not perceived by nursing students as appropriate for male nurses and one assumes that this would influence male students' career intentions in relation to child and adolescent mental health. On the contrary, working with babies, toddlers and young children is seen as highly appropriate for female therapists and consistent with society's expectations of women as nurturers (Boughn, 2001; Pollard & Walsh, 2000).

1.4.5 Career Intentions - versus - Job Choice

A review of the salient literature showed that very few studies have examined health students' intentions to pursue careers in certain speciality areas (career intentions) or the job and speciality areas they subsequently selected upon graduating (job choices). To date, related research has generally studied how students are attracted to certain professional training courses and once in training it seems that student health professionals receive minimal, if any, career guidance. For example, Robinson and Murrells (1998) found that only a minority of 447 recent mental health nursing graduates in Great Britain had received career information or advice, but the majority would have liked to have done. However, caution is required in accepting this conclusion, as it is unclear whether or not the participants involved in this study were a representative sample of mental health nurses.

Few of the reviewed studies have examined the relationship between career intentions and job choice. The majority of researchers have studied pre-qualifying health students' career intentions and did not go onto study their subsequent job choices (Alford, Miles, Palmer, & Espino, 2001; Boughn, 2001; Craik, Gissane, Douthwaite, & Philip, 2001; Doyle, Madigan, Cash, & Simons, 1998; Ferguson, 1998; Fleming et al., 1997; Happell, 1998a, 2001; Happell & Rushworth, 1999; McKenna, Scholtes,

Fleming, & Gilbert, 2001; Muldoon & Reilly, 2003; Ohman, Solomon, & Finch, 2002; Ohman, Stenlund, & Dahlgren, 2001; Philipps, Maloney, Stevens, Madigan, & Cash, 1997; Procter & Hafner, 1991; Pye & Whyte, 1996; Schnuth, Vasilenko, Mavis, & Marshall, 2003; Showers, 1992; Smith, 1999; Stevens & Dulhunty, 1992, 1997; Werrbach & DePoy, 1993; White, 1999). Lewicki, Smith, Cash, Madigan and Simons (1999) and Wittman, Swinehart, Cahill and Michel (1989) were exceptions to this trend, as they studied the career intentions of undergraduate occupational therapy students and their first job choice. However, it is difficult to generalise the findings of Lewicki et al. because of their small sample (N = 20) of students from one institution. Wittman et al. asked qualified occupational therapists to rate their career intentions in hindsight, meaning that data were collected retrospectively.

The implication of primarily focusing on under-graduate students' career intentions is that due to market forces these students may not go on to obtain work in their stated area of preference. For example, research in physiotherapy in Sweden and Canada by Öhman and colleagues concluded that the three most popular areas of practice were sports clinics, fitness centres and paediatrics (Ohman et al., 2002; Ohman et al., 2001). Based on their research the authors speculated that very few of these students would go on to work in the field of sports and fitness. This difference between area of stated preference and job availability is a dilemma graduating students face when they start to search for jobs. Notably however, only limited details were provided regarding the questionnaire used in this study and its validity and reliability.

Wittman et al. (1989) cautioned against thinking that occupational therapy students have only one career path in mind. In this study the authors surveyed 212 randomly selected occupational therapists who graduated from accredited educational programmes in the United States in 1986 (a 47% response rate). The authors concluded that at the end of training many students were not committed to one practice area only, but instead, viewed themselves as generalists who could be satisfied working in any of several areas (Wittman et al., 1989). Hence, it is likely that students who are interested in child and adolescent mental health may also be interested in several other speciality areas before graduating.

1.5 Career Intentions by Profession

1.5.1 Nursing students' career intentions.

Undergraduate nursing education in Australasia is now intended to prepare graduates for employment within a diverse range of settings at the level of beginning practitioner (Happell, 1998a). Although the nursing courses in New Zealand include some adult mental health content to varying degrees, very few include child and adolescent mental health as part of their curriculum (Peters, 2003). It can be difficult to add more content to the undergraduate nursing programmes as the curriculum is already 'stretched'. Various groups representing areas of specialist nursing practice often state that there is insufficient exposure to their area in undergraduate education, but they are generally met with the response that the curriculum is already over-crowded and "we couldn't possibly fit another thing in" (Happell, 2002b, p. 1).

Most nurses receive little, if any, career guidance (Robinson & Murrells, 1998). However, undergraduate nursing students usually commence their programme of study with specific views about the most desirable areas of nursing practice (Happell, 2001). In the area of theatre and critical care nursing, White (1999) concluded that, unless challenged by personal experience during their course, student nurses appeared to have preconceived images and expectations about nursing which they relied on for job selection. These students held generally negative images about theatre and critical care nursing, and, as they had little experience to test the accuracy of these expectations during their training, the negative view remained dominant when choosing a job (White, 1999).

Happell (2002a) assessed the popularity of specific career preferences for undergraduate nursing students in Australia. The students were first surveyed at the commencement of their studies and then at an unspecified later stage in their training. Although a highly significant increase in the popularity of psychiatric nursing was evident between the two time periods, other areas were still relatively more popular and psychiatric nursing continued to be ranked eighth out of nine areas. Only working with the elderly was less popular (Happell, 2002a). This reflects similar trends in other countries. For example, psychiatric nursing did not emerge as a popular career choice amongst a small sample of students (N = 56) surveyed in Ireland (Wells et al., 2000).

Student nurses tend to exit their education programme with a strong leaning towards medical-surgical nursing (Happell & Rushworth, 1999, Peters, 2003). Areas such as psychiatric nursing and aged care are significantly less popular than the highly technical areas and the specialities that involve the care of mothers, babies and children (Happell, 2001). This is of concern, as psychiatric nursing is in direct competition with other areas of nursing practice for nursing graduates. Happell (1999c) suggested that nursing students' view medical-surgical nursing as 'real nursing' and therefore prefer this area of practice. The "privilege of curing over caring" (Happell, 2002a, p. 9) provides a significant contribution to explaining the popularity of the technologically driven areas of nursing in comparison to the more care focused areas of aged care, psychiatric nursing and community mental health nursing (Happell, 2002a).

Working with children is viewed favourably as a future career option by student nurses at the commencement of their educational programme (Happell, 2000). The reasons given for this high level of interest, however, tend to reflect a somewhat "naïve and romantic" (p. 173) view of paediatric nursing (Happell, 2000). Problems experienced in the recruitment and retention of paediatric nurses suggest that this interest is not likely to be sustained (Happell, 2000).

1.5.2 Occupational therapy students' career intentions.

Eighty-three first year occupational therapy students in Australia were surveyed about their attitudes toward disabilities, factors underlying their decision to study occupational therapy and their course and career related expectations (Fleming et al., 1997). Their decision to study occupational therapy was largely based on altruistic and practical influences and most students expressed a desire to work in physical rehabilitation with children or adults (Fleming et al., 1997). Three-hundred-and-thirty first year occupational therapy students in London chose to do occupational therapy for similar reasons (Craik et al., 2001). They also identified practical factors, work place variety, challenge, an interest in people, and a desire to help people with disabilities as reasons for entering the profession. Job availability, promotion and salary were rated as the least important factors.

Lewicki and colleagues (1999) conducted a longitudinal study using a class of 20 occupational therapy students in the United States of America. They investigated the factors that influence students' practice area preferences at six points, ranging from pre-

admission to selection of their first job. Lewicki et al. (1999) concluded that student perceptions of their own competence in certain practice areas and job availability were highly influential when occupational therapy students chose their first job (Lewicki et al., 1999). This is consistent with earlier findings that if students experience little satisfaction or lack a sense of accomplishment from their work with clients while completing a particular clinical placement, it is less likely that they will choose to work in that setting (Christie et al., 1985).

Yerxa suggests that working in areas such as psychiatry may not be as appealing as physical rehabilitation because clients are perceived as being less capable of being helped (Yerxa, 1996). Paul (1996), Bailey (1990) and Craik et al., (2001) also suggested that occupational therapists working in mental health are susceptible to additional work-related stress when compared to their physical rehabilitation-focused counter-parts. They suggested that this was because mental health occupational therapists can experience role blurring, staff shortages, lack of respect for their role by other professionals, insufficient time and resources and clients who are chronically ill. This may in turn have an impact on a therapist's capacity to provide student supervision and that may then influence student perceptions of the practice area (McKenna et al., 2001; Paul, 1996).

1.5.3 Social work students' career intentions.

Smith (1999) surveyed 49 Masters of Social Work (MSW) students in the United States of America and concluded that life experiences were closely correlated to career intentions in several instances and the majority of students noted that their interest in entering the field of social work was due to personal experience (such as having previously experienced trauma or maltreatment) (Smith, 1999). In another American study, Werrbach and DePoy (1993) concluded that a significant number of student social workers indicated positive perceptions about working with the seriously mentally ill (Werrbach & DePoy, 1993). However, in a New Zealand study van Heugten and Rathgen (2003) concluded that social work in general is a challenging job, which involves stressful situations and is rewarded with comparatively low pay.

1.6 Measuring Career Intentions

There are no standard measures of nursing, occupational therapy and social work students' career intentions. The only relevant questionnaire was one used in Australia with nursing students by Stevens and Dulhunty (1992, 1997) and more recently by Happell (1998a, 2001) and Happell and Rushworth (1999). This questionnaire proved to be unsuitable for the current study. Stevens and Dulhunty's instrument required participants to rank, in order of preference, nine nursing areas in which they would most like to work after graduation (1=most preferred, 9=least preferred). In addition, a number of open-ended questions requested that participants explain their ranking of psychiatric nursing (where it ranked other than first or last). Students were also asked to include demographic details. The Stevens and Dulhunty questionnaire would not have been suitable in the current study, as it pertained only to practice areas within nursing. Listing practice areas across three disciplines would have involved a lengthy list, which would potentially have confused participants who may have been unfamiliar with practice areas in disciplines other than their own.

1.7 Summary of Literature

Numerous factors are thought to influence student nurses', occupational therapists' and social workers' career intentions (and subsequent job choice) in relation to child and adolescent mental health. These factors include: gender differences, classroom and placement experiences, profession-specific preferences and the stigma associated with mental ill-health. Identifying and positively influencing student career intentions in relation to this area is important, as the sector needs many more skilled health professionals in order to facilitate an improvement in child and adolescent mental health in New Zealand (Health Funding Authority, 2000a, 2000b; Mental Health Commission, 1999).

1.8 Rationale for Research

Previous studies in the area of undergraduate health students and their career intentions have predominantly been small scale, primarily conducted in one educational institution and/or within one profession and the quality of this previous research has been variable. Despite the limited empirical research in the area, it is thought that classroom and placement experiences can positively influence students' career intentions (Alford et al., 2001; Christie et al., 1985; Faleafā, 2003; Ferguson, 1998; Hemopo, 2004; Lambie & Stewart, 2003; McGhee, 1987; Pye & Whyte, 1996; Showers, 1992; van Heugten & Rathgen, 2003).

Peters (2003) contacted 42 participants from 21 agencies throughout New Zealand in her review of training programmes. She concluded that currently there is almost no teaching specific to child and adolescent mental health in nursing, occupational therapy or social work (Peters, 2003). However, all the participants saw child and adolescent mental health workforce development as a critical area to enhance and develop. Given that nursing, occupational therapy and social work students have so little child and adolescent mental health course content it is important to increase their training and therefore knowledge in this area. Therefore, a decision was made to develop a workshop for the current study and, if this was well regarded, to develop a CD-based teaching resource that could be used in the future. With an obvious staff shortage in the area of child and adolescent mental health this study had the potential to not only assist in improving students' knowledge of child and adolescent mental health, but also to attract qualified staff into the area.

This prospective study was intended as a 'first step' toward understanding how students' classroom experiences can potentially influence their career intentions in relation to child and adolescent mental health. The study did not go on to investigate students' subsequent job choices but this would be a worthwhile subsequent study.

1.8.1 Research Hypothesis

The hypothesis is that providing training in child and adolescent mental health will increase students' interest in working in this area.

1.8.2 Aims of the Study

Primary Aims of the Study

1. To develop a workshop in child and adolescent mental health in consultation with key stake-holders.

2. To measure the impact of the workshop on students' career intentions, taking into account their professional group, age, gender and ethnicity.

3. To measure the ongoing effect of the workshop on students' career intentions over time.

Secondary Aims of the Study

1. To encourage the ongoing inclusion of child and adolescent mental health teaching in the undergraduate nursing, occupational therapy and social work curriculum by developing a CD-based teaching resource.

2. To assess the quality of the workshop teaching as perceived by students and educators.

3. To conduct a preliminary evaluation of the CD-based teaching resource.

Chapter Two:
Methods - Development of the Workshop

2.1 Developing the Workshop

2.1.1 Workshop Consultation Process

To ensure that the content of the workshop was theoretically sound and was appropriately matched for the targeted undergraduate students I established three advisory groups in Semester I of 2004. The three groups consisted of an internal advisory group (made up of child and adolescent mental health experts within the Werry Centre), an external advisory group (which included interested educators within nursing, occupational therapy and social work) and a Māori advisory group (consisting of the Werry Centre's Kaumātua and Māori child and adolescent mental health clinicians and workers).

A Werry Centre colleague and I also consulted with nurses, occupational therapists and social workers in child and adolescent mental health services at district health boards to ascertain their views on the training needs of undergraduate students[7]. This was deemed particularly important, as many of these health professionals had recent experience of supervising students on placements in the area. Thirty-two health professionals responded from 13 of the 21 district health boards. The majority of respondents were either nurses (n = 11) or social workers (n = 13). Four occupational therapists also responded. Respondents clearly rated two areas as being of fundamental importance in a teaching resource in child and adolescent mental health. Such that, 25 rated 'child and adolescent development' and 23 rated 'recognising mental health issues in children and youth' as 'very important'.

I also consulted with mental health consumers in the development of the workshop. This consultation process was complicated for two main reasons. First, it was deemed inappropriate to access child and youth consumers within mental health services as they are a potentially vulnerable group and, although the project was expected to yield long-

[7] See Appendix C on page 107 for details.

term benefits in the way of improved training for undergraduate students, it was not expected to benefit these individuals directly. Secondly, for developmental reasons children and, to a lesser degree, teenagers would find it difficult to advise on the content and improvement of a teaching resource designed for adults. Anecdotally, consumer input into child and adolescent mental health services is mostly achieved by using a combination of adult mental health consumers, older teenage consumers (or young adults) or parents whose children have used child mental health services. Therefore, I met with an established youth group of older teens and young adults who had an experience of mental ill-health.

I developed a scenario-based survey[8] for group members to complete, in order that the group members could provide specific comment on various items including how health professionals can best engage with young mental health consumers. This feedback was used in the development of the video clips and specific quotes from these young people were also included in the workshop. Workshop presenters emphasised the youth consumers' advice that mental health professionals should be empathic, sensitive and respectful of clients. This was illustrated particularly well by a quote from a young woman that was used in the workshop, *"Again, it's all about respect, listening and showing that they [health professionals] think your opinion is valid. Relating to you openly and showing that they actually care about what's going on in your life/head and what's going to happen to you."*

2.1.2 Format of the Workshop

Following consultation with the consumer group and the three advisory groups and a review of the postal surveys, a basic workshop format was developed. The workshop was multi-media in format and included video clips, illustrations/pictures and a power-point presentation. It was divided into three sections: child and adolescent development, recognition of child and adolescent mental illness and evidence-based interventions in child and adolescent mental health. Although the majority of students had completed a life-span human development paper at Stage/Year I, the internal clinical advisors thought it essential that the workshop had a strong focus on child development. There were three main reasons for this: the surveyed child and adolescent mental health professionals rated this as the most important area to cover; it is unlikely

[8] See Appendix D on page 112 for details.

that student participants would have comprehensively studied all areas of social, emotional and cognitive development in childhood; and students may have forgotten aspects of this teaching at the time of the workshop. It was also critical that the presenters conducting the workshop knew that students had a working knowledge of child development and that they were well orientated to the area. Without this knowledge they would not have been able to recognise mental health conditions in childhood or be able to put certain behaviour into a developmental context. The first section included coverage of key aspects of child development that pertained to the information about psychopathology presented in the second section. For example, normal sociability and emotionality in the context of child temperament were described in the first section before students saw a clinical simulation of an anxious seven-year-old girl in the second section. Because of the limited time-frame of the workshop (three hours), the development section was similar in length to the assessment and treatment section of the workshop.

The workshop was developed in accordance with engagement theories of learning (Steiner, 1997). This meant that the workshop encouraged active participation, as opposed to passive reception, avoiding a transmission mode of learning. Examples of active engagement included: class brainstorming exercises, students answering questions about video clips of child development, students making observations during simulations, and discussion of these clinical observations. The workshop also took a narrative approach, which is thought to be especially beneficial for adult learners as stories and autobiographical information appear to promote learning (Rossiter, 2002). Throughout the workshop case studies, video-based clinical simulations, anecdotes from clinical work and real-life experiences were used to help illustrate theoretical points.

2.1.3 Development and Use of the Video Footage

The video excerpts used in the workshop were specifically developed for the project and considerable thought and effort went into their production. The clips varied in length from just over one minute to approximately ten minutes in duration. There were video clips in two of the three sections: child and adolescent development; and child and adolescent mental health illness recognition. These video clips consisted of several real-life situations used to illustrate normal development and six clinical simulations

with child actors and mental health professionals. The video clips were of children and adolescents aged from five months to 20 years of age and they were filmed in a variety of settings. The video clips were used to engage workshop participants in learning and to help illustrate real-life or realistic situations. A particular strength of the video footage was its use of New Zealanders in a New Zealand context and this helped make the workshop more relevant and meaningful for participants.

I developed the video clips with the assistance of the three advisory groups, staff within the faculty's learning technology unit and an independent film crew. As the video clips were to be used throughout the country in the workshops and then transposed into CD-Rom format, a number of ethical issues were raised and then addressed. These issues included informed consent and how to ensure that the video clips fairly portrayed parents and/or their children. This was especially the case in the child development section, where parents and children were filmed in day-to-day situations. Informed parental consent[9] was obtained from those involved in the child development video clips, and informed parental, actor and clinician consent[10] was obtained for the clinical simulations. Parents involved in the production of the real-life situations were also invited to preview and approve the video footage before editing was finalised. Furthermore, written and/or verbal consent was obtained from the relevant people for the use of locations and settings for filming.

Actors and experienced child and adolescent mental health professionals were used for the clinical simulations, as it would have been inappropriate to use actual clinical situations to illustrate points. However, it was imperative that the simulations were realistic so that students observed 'true-to-life' scenarios. To ensure clinical accuracy, five of the six child and youth actors were from a reputable acting agency and were auditioned by myself prior to being allocated roles appropriately matched to their age and ability. The clinicians used in the simulations and I also met with the actors before filming and briefed them on their character and how they should come across in the simulation. A de-brief was also offered for actors at the end of the session.

[9] See attached information sheet and consent form in Appendix E page 116.
[10] See attached information sheets and consent form in Appendix F page 122.

2.2 Finalising the Design and Content of the Workshop

Once the workshop content was approved by the internal, external and Māori advisory groups it was piloted before being used in the 14 time-tabled sessions. The pilot process allowed the content and timing of the workshop to be tested as well as assisting in the refinement of the questionnaires that were used in this study (for further details on the pilot process refer to the following chapter). The final workshop format was three hours in duration and this period included the questionnaire administration time. I facilitated the workshops with one of four co-facilitators; three were clinical psychologists and the fourth was a child and adolescent psychiatrist. All co-facilitators were experienced child and adolescent mental health clinicians. The workshop had four teaching objectives. These were: to highlight several theories of social, emotional and cognitive development including examples; to identify key aspects of the clinical assessment process in child and adolescent mental health; to outline some of the main issues associated with child and adolescent mental health; and to present the information in an engaging way that was likely to capture the interest of students.

In all three sections pertinent theories were highlighted and examples were used to reinforce these theoretical points. The child development section focused largely on social, emotional and cognitive aspects of development, such as relationships with others, temperament, theories of cognitive development (particularly aspects of Piaget's and Vygotsky's work) and the early stages of emotional development. Video clips were utilised to illustrate theoretical points and to prompt discussion in this section of the workshop. The illness recognition section included discussions, video-based clinical simulations and interactive exercises. In this section two video simulations with child actors were used, one of a seven-year-old girl with features of anxiety and the other of a 16-year-old boy with psychotic symptoms. These video excerpts were designed to encourage class discussion and interaction. Finally, the intervention/treatment section consisted of a brief overview of evidence-based psychosocial and pharmacological interventions used within child and adolescent mental health. Tables 2 and 3 provide an overview of the content, learning exercises and timeframes of the workshop.

Initially, only final year students, having previously completed a human development paper and an introduction to psychopathology, were to be included in the study. However, this approach had to be modified. Several social work courses offer human

development as an elective paper. Therefore, I could not be assured that all the students from these courses had completed such a paper. In addition, some social work courses do not teach psychopathology. Therefore, I could not be confident that all the time-tabled students had a thorough understanding of mental health illness recognition. This therefore affected the design of the workshop which was then adapted so that the needs of these students could be accommodated. In order to recruit the largest number of educational institutions and on advice from nursing educators, two workshops for second year nursing students were considered. This was suggested as the educators at these nursing schools believed that the workshop would best compliment their curriculum in second year. The workshop, having been modified for social work students was then also suitable for second year nursing students; therefore this alternative plan was followed.

Table 2: Overview of Content, Learning Exercises and Timeframes of the Workshop – Part I

TIME	CONTENT COVERED	LEARNING EXERCISE
Start to 25 minutes	Introductions – Presenters introduce themselves. Teaching objectives explained. Outline of workshop provided. Pre-workshop CIQ administered. Hand-outs distributed. Students watch the introduction video of the workshop by the Werry Centre Kaumātua.	Not applicable.
25 to 35 minutes	Child Development Section – *Relationships with others*. Overview of attachment theory and how attachment is measured. Students watch a short video clip of a two-year old separating from her mother at a play group.	Students make notes about the child's behaviour in the video clip. The class discusses how the video highlights features of secure attachment.
35 to 45 minutes	Child Development Section – *Defining family* and *family and it relevance*. Definitions of family provided. Students watch a video clip of two Māori girls (aged two and nine) defining family. Youth 2000 study findings, pertaining to family and its significance discussed (Adolescent Health Research Group, 2003).	Based on the video clip, students make notes (and discuss as a class) how chronological age and a child's culture impact on definitions of family.
45 to 55 minutes	Child Development Section – *Temperament.* Temperament defined and three dimensions of this (emotionality, activity and sociability) described.	Students view video of parents talking about their children's temperaments and discuss this.
55 minutes to 1 hour 5 minutes	Child Development Section – *Cognitive development.* Summary of Piaget's four main stages of cognitive development and Vygotsky's socio-cultural theory presented. Theory of mind defined and described.	Students watch a video clip of imaginative play and discuss this. Students also watch a video clip of the 'rouge test'.
1 hour 5 minutes to 1 hour 15 minutes	Child Development Section – *Emotional development.* Emotional development occurring over the first three years described. Description of how theory of mind impacts on the development of secondary emotions (such as empathy, envy and embarrassment).	Not applicable.
1 hour and 15 minutes to 1 hour 30 minutes	Child Development - Conclusion - *"What does a mentally healthy child look like?"* What is developmentally appropriate socially, emotionally and cognitively at age 5 years?	Students are asked to brainstorm their suggestions and discuss these as a class.
1 hour 30 minutes to 1 hour 45 minutes	BREAK – 15 minutes	Not applicable.

Table 3: Overview of Content, Learning Exercises and Timeframes of the Workshop – Part II

TIME	CONTENT COVERED	LEARNING EXERCISE
1 hour 45 minutes to 1 hour 50 minutes	Assessment Section – *Basic facts and diagnostic tools used in the area.* Refer to Youth 2000 study to reinforce that more than 80% of teenagers feel mentally healthy. Introduce diagnostic tools in relation to child and adolescent mental health.	Refer students to the Youth 2000 website (www.youth2000.ac.nz) to learn more about teenage norms in NZ.
1 hour 50 minutes to 2 hours	Assessment Section – *Advantages and disadvantages of using diagnostic tools.* DSM-IV and ICD-10 briefly discussed in the context of child and adolescent mental health.	Students brainstorm 'pros and cons' of diagnostic tools and discuss these as a class.
2 hours to 2 hours 10 minutes.	Assessment Section – *Assessment Process*. Presenters describe the assessment process - introductions, history taking, mental state and formulation. Particular attention is drawn to consent and confidentiality issues.	Not applicable.
2 hours 10 minutes to 2 hours 30 minutes	Assessment Section – *Clinical Simulation One.* Students are given a case study (a 16-year-old boy with psychotic symptoms) and watch a video excerpt of a simulated clinical interview. Quotes from youth consumers about engagement and recovery are also discussed.	Students are asked to make notes of their clinical observations and concerns. These are then discussed as a class.
2 hours 30 minutes to 2 hours 45 minutes	Assessment Section – *Clinical Simulation Two.* Students are given a case study (a 7-year-old girl with symptoms of anxiety) and they watch a video excerpt of a simulated clinical interview.	Students are asked to make notes about the clinician's interview style and compare these to the style of the previous case study.
2 hours 45 minutes to 2 hours 55 minutes	Treatment Section – *Evidence-based interventions.* Presenters discuss current evidence-based treatments and then additional treatments. The presenters also refer to their references and to relevant websites.	Not applicable.
2 hours 55 to 3 hours	Post-workshop CIQ and the QTQ-S and QTQ-E are administered for students and educators. Workshop concludes.	Not applicable.

Chapter Three:
Methods - Development of the Questionnaires

3.1 Development of the Career Intentions Questionnaire (CIQ)

To date, there are no established questionnaires for measuring students' or graduates' career intentions in allied health. Therefore, self-report questionnaires were created specifically for the current study to gather information from respondents about their career intentions. These questionnaires were developed in consultation with allied health professionals and an experienced bio-statistician. Senior nurses, occupational therapists and social workers were consulted to ensure that the terminology used in the questionnaire would be understood as intended across disciplines. Māori cultural advice was also obtained to ensure that the questionnaire was culturally sound. The questionnaire was called the Career Intentions Questionnaire (CIQ)[11] and student participants were to complete the CIQ before and after the workshop and at a follow-up point in time (between three and 16 weeks after the workshop).

The revised CIQ was divided into three sections – demographic data (including age, sex and ethnicity); students' ratings of their stated career intentions, based on visual analogue scales (VAS); and a survey of factors impacting on students' stated career intentions. VAS were used as it was thought that they would provide greater sensitivity than Likert Scales, which were also considered (Gift, 1989; McCormack, Horne, & Sheather, 1988; Pfennings, Cohen, & Ploeg, 1995). In addition, 100 millimetre-long VAS allowed for the information to be continuous as opposed to categorical and easily converted into percentage scores for analysis.

Participants were asked to use a unique identification or ID code in this study; names were not collected and participants were anonymous ensuring confidentiality. Anonymity was considered important to ensure participants trusted the research process and were encouraged to take part. To ensure student participants understood how to generate their ID number a written explanation was added to the CIQ. This allowed for

[11] Refer to Appendix A page 101 for a copy of the final version of the CIQ.

the matching up of data from each respondent for analysis. In the demographic section of the CIQ the Statistics New Zealand census categories and terminology for the ethnicity question were used as this is an established way of gathering ethnicity data.

I consulted with seven allied health professionals (two nurses, two occupational therapists, two social workers and a clinical psychologist) to develop the CIQ. In particular, I focused the health professionals' attention to the language used in the questionnaire and I verified with them that the terminology used would be understood as intended across the three disciplines. Three themes with nine key statements were formulated in relation to career intentions. The three themes were: the age group of people students were interested in working with; whether students were interested in working with people with physical disabilities, mental health issues or people that had neither of these; and students' preferred work setting. The nine key statements were: 1) "I would like to work with children and/or adolescents, aged between 0 and 19 years of age"; 2) "I would like to work with adults, aged between 20 and 64 years of age"; 3) "I would like to work with older adults, aged 65 years of age and older"; 4) "I would like to work with people who have a physical disability"; 5) "I would like to work in a hospital setting"; 6) "I would like to work in mental health"; 7) "I would like to work in a community setting"; 8) "I would like to work in child and adolescent mental health"; and 9) "I would like to work with people who do not have a physical disability or mental health condition (physical disability to include – all physical and/or medical illnesses, disorders or disabilities)". These statements were then converted into VAS that could measure corresponding career intentions. The VAS were 100 millimetres in length. Zero millimetres corresponded to a "Not at all" (least intention to work in area) rating and 100 millimetres corresponded to a "Very much so" (most intention to work in area) rating.

After further consultation with a bio-statistician and a post-graduate research group within my department, several additional improvements were made to the draft questionnaire. It was decided that statement 8. "I would like to work in child and adolescent mental health" needed to be a separate statement, as the two other related statements ("I would like to work in mental health" and "I would like to work with children and/or adolescents, aged between 0 and 19 years of age") would not have measured participants' career intentions in relation to child and adolescent mental

health specifically. In addition, certain key phrases were highlighted. For example, "please tick in one box only for each factor" was printed in bold to ensure that student participants did not tick more than one box. The term "physical disability" was also clearly defined, so that participants knew that physical disability included all physical and/or medical illnesses, disorders and disabilities.

The seven allied health professionals also assisted in the development of the survey of factors that impact on career or job choice. The list of fourteen factors which influence job choice in healthcare across the three disciplines was supported by the literature (Boswell at al., 2003; Tracey & Hopkins, 2001) and/or anecdotal evidence from the professionals. These factors were: cultural fit, working with at risk clients, job satisfaction, a high pressure job, the geographical location of the job, a job with supports available, professional development and progression opportunities, a job with generous pay, personal interest in the area/specialty, clients with challenging behaviours, prestige/status of the job, working in a team with a range of professions, working in a profession-specific role/job, and being able to help people or groups of people. This section of the CIQ was arranged in a basic tick-box format to simplify the layout for participants. These data were only analysed at baseline and not post-workshop or at follow-up.

3.2 Development of the Quality of Teaching Questionnaires (QTQ-S and QTQ-E)

I assumed that a workshop would be more successful in encouraging students to consider a career in child and adolescent mental health if it was both engaging and interesting. Educators from the training institutions involved in the study were also invited to attend these workshops and evaluate the quality and acceptability of the workshops. It was anticipated that their perceptions of the workshop's quality could differ from that of their students and that these views could also impact upon educators' motivation to add the workshop to their curriculum. If the educators found that the workshop was irrelevant or poorly presented they might decide not to teach the topic in the following academic year. In order to assess these factors, a questionnaire was developed. This questionnaire was called the Quality of Teaching Questionnaire (QTQ). There were two versions of this questionnaire, one for students called the Quality of Teaching Questionnaire-Student Version (QTQ-S) and the other for

educators called the Quality of Teaching Questionnaire-Educator Version (QTQ-E). In completing the QTQ-S and QTQ-E, student participants and educators were asked to evaluate the quality and acceptability of the workshop[12].

The questionnaires were administered at the end of the workshop and these were based on standards of established evaluation at the University of Auckland. My supervisor and I selected twelve key statements to evaluate the workshop's quality of teaching. These statements focused primarily on the content of the workshop and the teaching process as opposed to factors associated with the teacher/presenter. This was done because the quality of teaching information was also used to inform decisions about how the workshop format could be adapted to a child and adolescent mental health teaching resource in CD-Rom format. These twelve statements were: 1) The session helped motivate me to learn; 2) I found the session intellectually stimulating; 3) The session helped deepen my understanding; 4) The multi-media format of the session was effective; 5) The objectives of the session were clearly explained; 6) The session progressed at the right pace; 7) The session was well organised; 8) The session was presented in an interesting manner; 9) Real-world examples were used effectively; 10) I was satisfied with the quality of this session; 11) My interest in the subject has increased as a consequence of this lecture; and 12) Students were encouraged to ask questions. In the QTQ-E educators were asked to respond to a thirteenth statement, "I would like to see this session repeated next year." Students and educators were asked to respond to each of the statements by indicating whether they strongly agreed, agreed, held no opinion (neutral), disagreed or strongly disagreed with each of the statements. This information was then converted into a score of between 5 (for strongly agreed) and 1 (for strongly disagreed). Both the QTQ-S and QTQ-E had two open-ended questions, "What was most helpful for your learning?" and "What improvements would you like to see?"

3.3 Ethical Approval

Ethical approval for this study was sought from and granted by the University of Auckland Human Participants Ethics Committee (reference number/code 2004/055)

[12] Refer to Appendix B page 104 for copies of the QTQ-S and QTQ-E

prior to piloting, and subsequently using the questionnaires[13]. In accordance with ethical approval participants indicated consent by completing the questionnaires. Participant information sheets were also provided to the heads of department, educators participating in the workshops and student participants[14]. Written consent from the heads of schools/departments and educators was obtained before the workshops started[15].

3.4 Pilot Process

A pilot study was conducted before the start of the 14 scheduled workshops. The pilot process was primarily used to ensure that participants answered the CIQ and the QTQ-S and QTQ-E as intended. The pilot also allowed me to refine the delivery of the workshop presentation with a co-facilitator.

I recruited post-graduate nursing students (pilot participants) via a training institution in Auckland that had time-tabled a workshop for their undergraduate students. The pilot participants were in their first professional year of practice and were studying toward a certificate in mental health nursing. This educational institution was selected for convenience and the pilot involved post-graduate students so that the undergraduate students within the institution could still participate in the main study. The pilot workshop was conducted during a scheduled teaching session. In total, 33 pilot participants completed the CIQ before and after the workshop as well as the completing the QTQ. One participant returned blank questionnaires and three participants left the workshop early and therefore did not complete post-workshop surveys. The group was primarily female and Pakeha/New Zealand European in composition. It included 26 women, 7 men and 19 Pakeha, 3 Māori and 4 Indian participants.

The pilot participants differed from the participants in the main study in three main ways: they had recently qualified to practice, they had chosen to specialise in mental health after completing their nursing training, and they were all nurses. However, the pilot participants were similar to nursing undergraduates who participated in the main study in that they were nurses who had completed comprehensive training in New Zealand and did not have extensive experience in mental health practice.

[13] Refer to Appendix G page 138 for a copy of the letter confirming ethical approval from the University of Auckland Human Participants Ethics Committee.
[14] Refer to Appendix H page 141 for copies of the participant information sheets.
[15] Refer to Appendix I page 148 for copies of the consent forms.

On examining the pilot participants' responses on the CIQ and the QTQ with the departmental bio-statistician several participants were found to have had difficulty generating their ID code. Three changes were made to the CIQ and QTQ in an attempt to eliminate this problem:

1. At the end of both questionnaires, participants were thanked and asked "Please double-check your identification (ID) number is correctly filled out."

2. The written description of how participants created an individualised ID code was clarified.

3. To further increase clarity I verbally explained how the code was to be used before beginning each workshop.

A further problem was also identified with the layout of the QTQ, whereby student participants appeared confused by the separate educator only question. As a result separate educator (QTQ-E) and student (QTQ-S) questionnaires were used.

Chapter Four:
Methods - Study Procedure

4.1 Participants

To be included in the study participants were to be degree-level nursing, occupational therapy and social work students at educational institutions in New Zealand. The eligible courses were identified by their professional association as educating students to degree level. The Nursing Council of New Zealand, the New Zealand Association of Occupational Therapists (NZAOT) and the Aotearoa/New Zealand Association of Social Workers (ANZASW) websites confirmed the educational status of various training programmes. Educational institutions were excluded from the study if they only provided education at less than degree level (i.e. National Diploma, Level 6) or at a post-graduate level. These exclusion criteria were set to ensure that participating students were studying at a comparable level.

4.2 Recruitment Process

Letters were sent to the heads of schools/departments of all the courses that met the inclusion criteria in January 2004[16]. The letter introduced the Werry Centre and its aims and introduced the study.

Heads of schools/departments were offered a free three-hour workshop on child and adolescent mental health for final year students if they agreed that students and staff could be asked to participate in a study evaluating the effectiveness of the workshop and its impact on students' career intentions. Educators were asked to contact me so that a workshop time could be arranged for either the end of Semester I or the beginning of Semester II 2004 (May to August 2004). A follow-up letter was sent to all the Heads of Departments/Schools with a copy of Janet Peters' report (Peters, 2003) in April 2004. Three follow-up telephone calls were made or emails sent to encourage a response from educators and heads of departments.

[16] Refer to Appendix J page 151 for a copy of the letter.

A telephone survey of the heads of department/school of the institutions that did not participate was conducted to ascertain their reasons for non-participation.

4.3 Administration of the Questionnaires

The CIQ was administered before and after each workshop. Both the QTQ-S and QTQ-E were administered after each workshop. The time required to complete these four questionnaires was approximately 25 minutes and this was incorporated in the workshop time-table. The administration of the follow-up CIQ was negotiated with individual educators. I hoped that educators would be able to facilitate students completing the follow-up CIQ, as the workshops were to take place in various cities around New Zealand and it was not possible for me to personally administer these.

4.4 Data Preparation and Checking

4.4.1 CIQ Data Preparation and Checking

Students rated nine work areas on VAS on the CIQ. I measured all of the VAS and checked these before entering the data into a computer programme. To ensure the VAS were measured correctly and accurately entered into the programme an independent researcher (not involved in this study) measured and checked the corresponding data entry for a random 5% sample of the VAS. Of the 405 VAS entries, 99% of the measurements were the same and five VAS (1%) varied from the original measurement (by one millimetre each) and all the corresponding data were correctly entered into the data spreadsheet. Not all participants' completed VAS ratings across the nine work areas. Some participants did not respond to various parts of the questionnaire (for unknown reasons). Some participants' VAS could not be measured (e.g., if a participant marked the VAS in more than one place).

In the CIQ Students were also asked to rate 14 areas associated with job or career choice as positive (corresponded to a score of 2), neutral (corresponded to a score of 1) or negative (corresponded to a score of 0). I entered these data into a computer programme. To ensure the data were entered correctly an independent researcher (not involved in this study) checked the data for a random 5% sample.

4.4.2 QTQ Data Preparation and Checking

I entered the QTQ data into a computer programme and, to ensure the data were entered correctly, an independent researcher (not involved in this study) checked the data entry for a random 5% sample of the QTQ-S and QTQ-E. All the data were found to be correctly entered.

4.5 Data Analysis

The same participants were used across the measures to assist in minimising the influences of extraneous variables on the dependent variable. A meaningful sample size calculation could not be completed as the necessary information, such as the effect sizes from previous related studies were not available. However, I did aim to recruit a large sample.

Descriptive statistics including means and frequencies were used to describe the demographic characteristics of the participants in the different occupational groups. The differences in change in career intentions scores over time between the occupational groups were analysed using generalised mixed linear models that allowed for repeated measures over time and for institution. Age, gender and ethnicity data were included in the models. To investigate whether any differences found were likely to be related to the workshop, changes in intentions to work in child and adolescent mental health were compared with changes in intentions to work with older adults. I argued that a workshop on child and adolescent mental health would have no impact on students' intentions to work with older adults. The quality of teaching data were converted to a summary score. Kruskal Wallis and Mann-Whitney U tests were used to test differences in medians between groups. SPSS (2002) and SAS (version 9) statistical packages were used for analyses.

Limited qualitative data were also gathered in this study. The qualitative data consisted of student and educator responses to the open-ended questions in the QTQ-S and QTQ-E. The participants' responses were examined by the researcher and common themes and ideas were identified and recorded. To check for consistency in the interpretation, the qualitative data was also examined by an independent researcher not involved in this study.

Chapter Five:
Quantitative Results

5.1 Participants

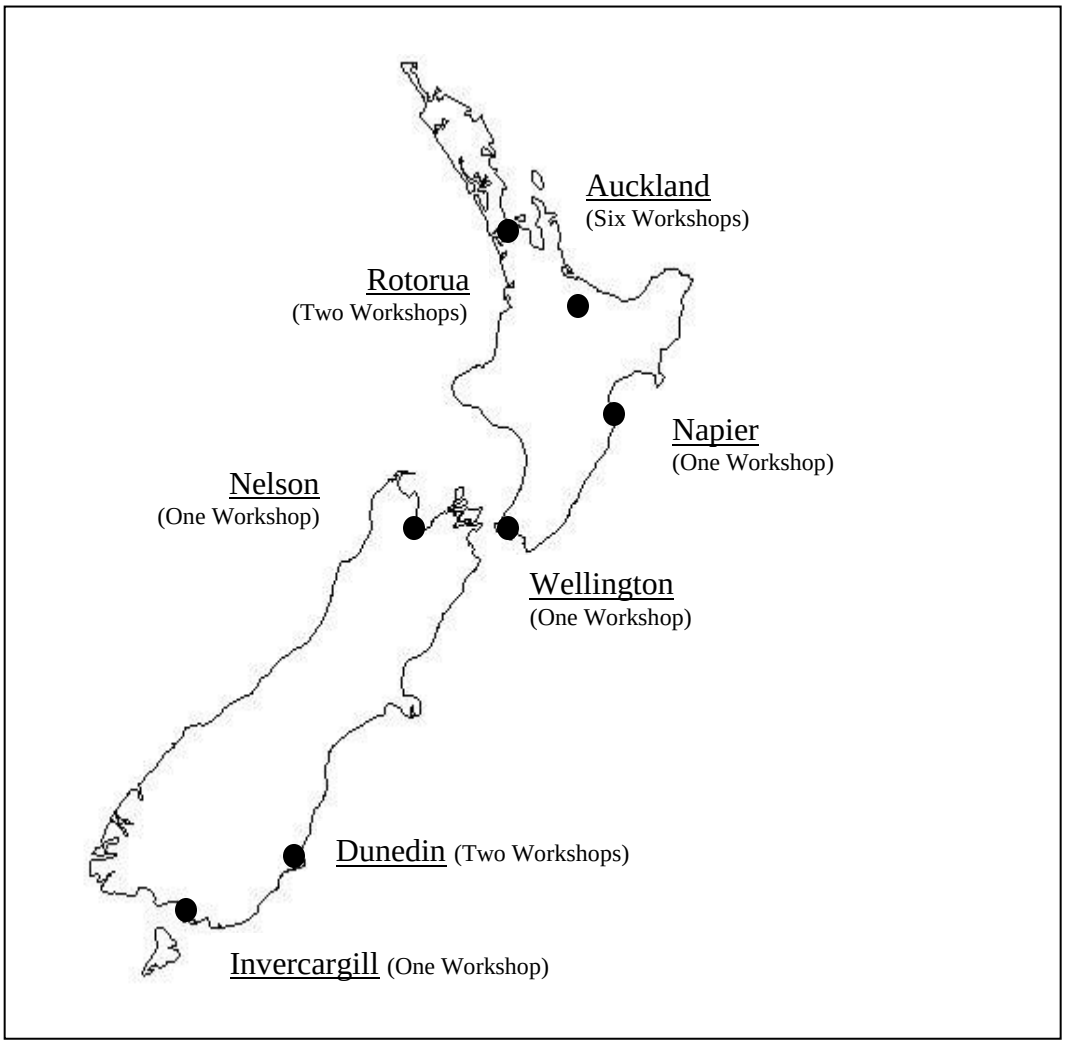
5.1.1 Participating Educational Institutions

Eighteen nursing, two occupational therapy and eight social work schools were invited to participate in this study (28 in total). Of the 28 eligible courses nine were at Universities and nineteen were at Polytechnics or Institutes of Technology. As a result of the letters and follow-up contacts 21 educators called to make enquires or to arrange a workshop time, however not all of these educators wanted to take up the opportunity of a 'free' workshop.

Fourteen workshops (excluding the pilot) were scheduled with students and their educators. Eight out of 18 nursing programmes, both occupational therapy programmes and four out of eight social work programmes participated in this study. Initially, the workshops were to begin at the end of May and continue until the end of July in 2004. However, due to the timing of clinical placements, course timetable issues and staff/student availability the workshops took place between the 11th of May (pilot presentation) and the 17th of August 2004.

The time-tabled workshops were conducted throughout New Zealand in seven cities: Auckland, Rotorua, Napier, Wellington, Nelson, Dunedin and Invercargill.

Figure 1: Location and Number of Workshops held throughout New Zealand.



5.1.2 Individual Participants

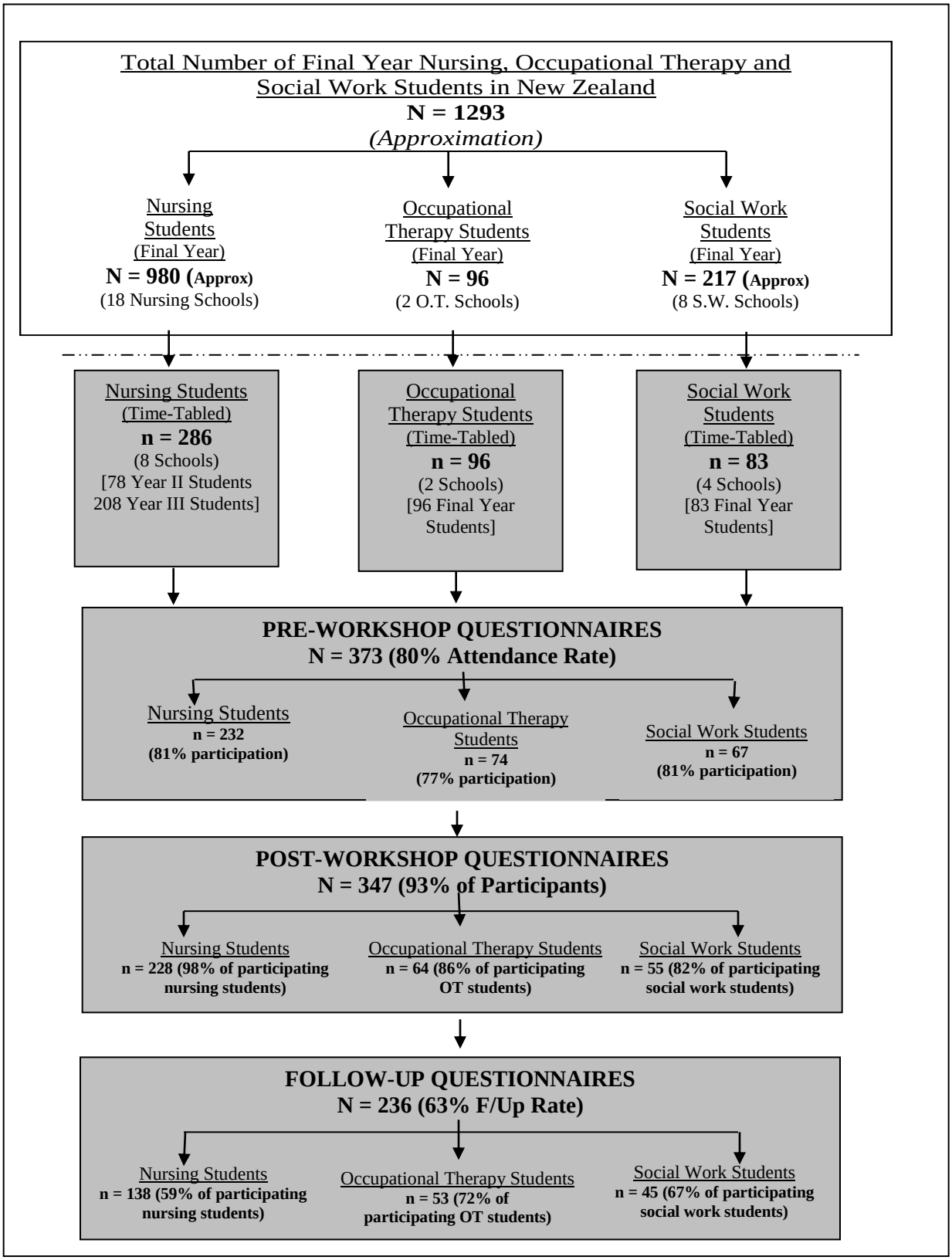
In all 465 students and 16 educators were timetabled to attend the workshops; 373 students (80%) and 15 educators (94%) actively participated. According to educators at the workshops, this 80% attendance rate represented a typical level of student attendance. In addition, educators commented that increased numbers would have been likely if the workshop content had involved formal student assessment. Of the total number of participants, 232 were nursing students, 74 were occupational therapy students and 67 were social work students. Of note, both schools of occupational therapy participated in the study. Therefore, their 77% percentage attendance rate

meant that 77% of all final year occupational therapy students in New Zealand participated in the current study.

Ninety-two students (20% of those time-tabled to attend the workshops) did not participate in this study. Of those 92 students, 82 did not come to their time-tabled class and were therefore classified as non-participants, five attended the workshop but returned blank questionnaires, three students did not enter a code on their questionnaire, and two social work students chose not to complete the questionnaires as they stated that they were already working as social workers.

A telephone survey of educational institutions was conducted to obtain the number of final year nursing, occupational therapy and social work students in New Zealand. This gives an approximation of the number of graduating students in any given year compared to the participants in the current study. In two institutions second year students participated in this study, however when this was the case no final year students participated. The results of this survey are an approximation of the overall numbers, as it was difficult to obtain the exact number of final year degree level students eligible to graduate at the end of 2004. Gaining the exact number of students was complicated by three issues: some courses have both post-graduate and undergraduate students in the same cohort; some cohorts are made up of full-time and part-time students; and some institutions have more than one intake per academic year. The following chart highlights the overall number of final year nursing, occupational therapy and social work students in New Zealand in relation to the workshop participants.

Figure 2: Flow diagram of the overall number of students in relation to the study's participants.



5.2 Demographics of Participants

The demographics of the participants are summarised in the following table.

Table 4: Baseline Demographic Data.

Category	Total	Nursing	Occupational Therapy	Social Work
Gender				
Male	*n = 37* (9.92%)	*n = 15* (6.47%)	*n = 8* (10.81%)	*n = 14* (20.90%)
Female	*n = 335* (89.81%)	*n = 217* (93.53%)	*n = 66* (89.19%)	*n = 52* (77.61%)
Not reported	*n = 1* (0.27%)			*n = 1* (1.49%)
Age				
n =	360	*228*	*73*	*59*
Minimum Age	19 Years	19 Years	20 Years	20 Years
Maximum Age	67 Years	67 Years	50 Years	62 Years
Mean Age	27.5 Years	28 Years	22 Years	40 Years
Not reported	13	4	1	8
Ethnicity				
NZ European[17]	*n = 229* (61.39%)	*n = 149* (64.22%)	*n = 58* (78.38%)	*n = 22* (32.84%)
Māori[18]	*n = 48* (12.87%)	*n = 23* (9.91%)	*n = 6* (8.11%)	*n = 19* (28.36%)
Pacific[19]	*n = 29* (7.77%)	*n = 9* (3.88%)	*n = 1* (1.35%)	*n = 19* (28.36%)
Asian[20]	*n = 42* (11.26%)	*n = 35* (15.09%)	*n = 6* (8.11%)	*n = 1* (1.49%)
Other[21]	*n = 23* (6.17%)	*n = 15* (6.47%)	*n = 3* (4.05%)	*n = 5* (7.46%)
Not reported	*n = 2* (0.54%)	*n = 1* (0.43%)		*n = 1* (1.49%)

17 The New Zealand European/Pakeha group also included people who identified as being: English (n = 4), Scottish (n = 2), 'NZer' (n = 2), British (n = 1) and Australian and Pakeha (n = 1).

18 The Māori group also included people who identified as being: NZ European/Pakeha and Māori (n = 13), Pakeha and Māori and Dutch (n = 1), Pakeha and Māori and Finnish (n = 1), Māori and Niuean (n = 1), Māori and English (n = 1) and Māori and Chilean (n = 1).

19 The Pacific group included people who identified as being: Samoan (n = 13), Tongan (n = 5), Cook Island Māori (n = 3), Niuean (n = 2), Tongan and other (n = 1), Samoan and Cook Island Māori (n = 1), Samoan and Tokelauan and Mixture (n = 1), Samoan and Niuean (n = 1), Samoan and Pakeha (n = 1) and Samoan and Chinese (n = 1).

20 The Asian group included participants who identified as being: Chinese (n = 15), Indian (n = 13), Filipino (n = 7), Taiwanese (n = 3), Korean (n = 2), Japanese (n = 1) and Chinese and Filipino (n = 1).

21 The Other group included participants who identified as being: Fijian Indian (n = 6), African (n = 3), South African and South African European (n = 2), Australian (n = 2), Dutch (n = 2), Norwegian (n = 2), NZ European and Indian (n = 1), NZ American Indian (n =1), Czech (n = 1), German (n = 1), Zimbabwean (n =1) and Ghanaian (n = 1).

5.2.1 Gender of Participants

There were more female than male participants across all three professions. However, more males were training to be social workers than occupational therapists or nurses.

5.2.2 Age of Participants

Most participants were young adults, but there was a wide age range. On average the social work participants were 18 years older than the occupational therapy participants and 12 years older than the nursing participants.

5.2.3 Ethnicity of Participants

The majority of participants identified as being New Zealand European or Pakeha New Zealanders. The social work group consisted of almost equal numbers of Pakeha, Māori and Pacific students. The occupational therapy group was the most homogeneous with the majority of students identifying as New European/Pakeha.

5.2.4 Summary of Participants

The nursing participants constituted the largest group and also had the highest percentage of female students. The occupational therapy participants were younger on average and this professional group consisted of the highest percentage of New Zealand European students. The social work participants were the most diverse group with the lowest percentage of female students, the highest median age, and the highest percentage of Māori and Pacific students. Because there were considerable differences between participants across age, ethnicity, gender and profession these were taken into account for the career intentions analyses.

5.3 Non-Participants

A telephone survey of the educational institutions that did not participate in the study was conducted to ascertain their reasons for not taking part. Both occupational therapy schools (100%) participated in the study. Therefore, the comments below only apply to the nursing and social work training courses. The demographic characteristics of non-participants are unknown and it was not possible to obtain these data. In addition, the 20% of students and one educator that were timetabled to attend the workshops, but did not do so, were also classified as non-participants.

5.3.1 Non-Participating Nursing Educational Institutions

Eight out of the ten non-participating nursing programmes gave reasons for their non-participation. Two institutions did not participate, despite reporting that they were interested, owing to having new staff members that were too busy orientating to their position. Four institutions reported staff were too busy to organise, co-ordinate or respond to the workshop request (of these four, two educators commented upon their courses being full and there being not enough time for speciality topics). One institution's head of department (HOD) left the institution and mental health educators within the department were unaware that the workshop was being offered. Another HOD said a letter had been sent expressing an interest in the workshop, but no such letter was received. A further two nursing schools did not respond to my four telephone messages.

5.3.2 Non-Participating Social Work Educational Institutions

Three out of the four non-participating social work programmes gave reasons for their non-participation. One institution did not participate as an educator cited concerns about the use of the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) in the workshop and the relevance of a 'medical model' view on mental illness. He also highlighted his concerns about philosophical differences between medical/healthcare education and social practice/social policy education, and therefore questioned the suitability of the workshop for his students. Another educator declined to participate as she stated that her course had sufficient child and adolescent mental health content. A third educator expressed an interest in the workshop and said that she had sent a letter expressing an interest in the workshop, but no such letter was received. This educator expressed disappointment that a workshop could not be arranged when I contacted her after all the workshops had been time-tabled. A further social work school did not respond to my four telephone messages.

5.4 Career Intentions Questionnaire (CIQ) – Baseline Data

5.4.1 Baseline Results - VAS

The results of the first CIQ, which were completed before the commencement of the workshop are shown in Table 5. This showed that working with children and/or adolescents was very popular. Working with adults was also popular, but working with older adults was less well rated.

Working with people who have a physical disability was moderately popular. However, wanting to work with people with mental health issues was considerably less well rated. Although working with children and adolescents is very popular, working in child and adolescent mental health received a similar rating to working in mental health generally.

Participants rated working in a community setting higher than working in a hospital setting. Working with people who do not have a physical disability or mental health condition received a low rating.

Table 5: Baseline CIQ Results by Question.

Question (VAS)	N	Mean	Standard Deviation
Question 1 - "I would like to work with children and/or adolescents, aged between 0 and 19 years of age."	363	69.0	29.0
Question 2 - "I would like to work with adults, aged between 20 and 64 years of age."	363	65.7	22.8
Question 3 - "I would like to work with older adults, aged 65 years of age and older."	364	38.7	29.5
Question 4 – "I would like to work with people who have a physical disability." *(Physical disability to include – all physical and/or medical illnesses, disorders or disabilities).*	362	57.4	27.7
Question 5 – "I would like to work in a hospital setting."	364	57.1	30.4
Question 6 – "I would like to work in mental health."	366	52.0	30.1
Question 7 – "I would like to work in a community setting."	367	64.9	26.5
Question 8 – "I would like to work in child and adolescent mental health."	365	52.3	28.7
Question 9 – "I would like to work with people that do not have a physical disability or mental health condition." *(Physical disability to include – all physical and/or medical illnesses, disorders or disabilities).*	363	46.4	27.3

5.4.2 Baseline Popularity of Working in child and adolescent mental health

Overall, working in child and adolescent mental health received a similar rating to working in mental health generally. However, 20% of participants (n = 73) rated working in child and adolescent mental health very favourably, with career intentions ratings of between 80 and 100. A generalised linear mixed model showed the impact of profession, age, gender and ethnicity on career intentions. Occupational therapy students were significantly more likely to want to work in child and adolescent mental health when compared to nursing and social work students ($F_{2,335}$ = 3.09, p = 0.05). There was no significant association between the mean score and students' ethnicity, age, or gender.

Table 6: Question 8 – "I would like to work in child and adolescent mental health."

Category	Mean* *(Standard Error)*	p-value
Professional Group		
Nursing	54.96 *(3.49)*	
Occupational Therapy	64.79 *(4.53)*	p = 0.05
Social Work	55.48 *(4.65)*	
Gender		
Female	57.19 *(2.50)*	p = 0.7
Male	59.63 *(5.28)*	
Ethnicity		
NZ European	52.83 *(3.15)*	
Māori	57.84 *(5.01)*	
Pacific	67.59 *(6.74)*	p = 0.3
Asian	56.23 *(5.30)*	
Other	57.56 *(6.45)*	
Age		
Trend – No significant trend observed		p = 0.9

***** Means adjusted for other variables in the model and clustering.

5.4.3 Factors that influence career or job choice

Although 373 students completed the CIQ, data are missing for between five and 14 students for each item about factors thought to influence career or job choice. The number of responses across the 14 areas varied for two reasons. First, some participants did not respond to various statements (for unknown reasons) and, secondly, some participants' ratings could not be entered (for example, if a participant gave more than one rating).

The five factors that participants rated as having the most positive influence in relation to job or career choice were: job satisfaction (97% of participants), personal interest in the area/speciality (94.2% of participants), a job with supports available (93.1% of participants), being able to help people or groups of people (92.7% of participants) and professional development and progression opportunities (91.8% of participants). The factor that participants rated the least favourably (what students are not looking for in a career or job) was a high pressure job (35.3% of participants rated this a negative influence). Table 7 shows the percentage positive, neutral and negative ratings for the 14 factors that influence career or job choice in order from most to least favourable.

Table 7: Participants' Mean and Standard Deviation Scores for Factors Associated with Job/Career Choice from the CIQ.

Factors from the CIQ	*N*	*Positive Influence (%)*	*Neutral Influence (%)*	*Negative Influence (%)*
"Job satisfaction"	367	97.0	2.5	0.5
"Personal interest in the area/speciality"	363	94.2	5.5	0.3
"A job with supports available"	363	93.1	6.6	0.3
"Being able to help people or groups of people"	368	92.7	6.8	0.5
"Professional development and progression opportunities"	367	91.8	7.9	0.3
"A job with generous pay"	365	80.8	19.2	0
"Working in a team with a range of professionals"	365	75.3	23.8	0.9
"The geographical location of the job"	365	72.3	25.2	2.5
"Working in a profession-specific role/job"	360	57.5	41.1	1.4
"Working with at risk clients"	360	43.1	46.4	10.5
"Cultural fit"	359	42.1	56.3	1.6
"Clients with challenging behaviours"	364	32.7	56.3	11.0
"Prestige/status of the job"	361	25.8	63.2	11.0
"A high pressure job"	360	11.1	53.6	35.3

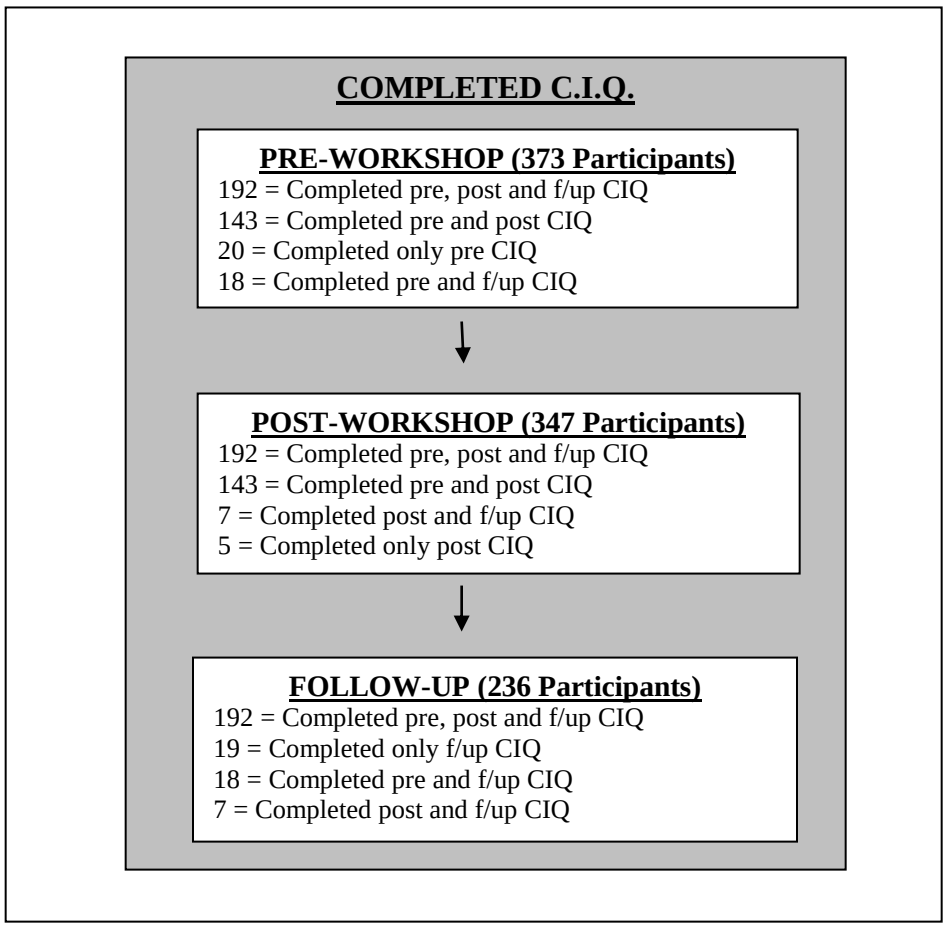
5.5 Follow-Up Career Intentions Results

5.5.1 CIQ– Responses over Time

Three-hundred-and-forty-seven (93%) of participants completed a questionnaire after the workshop. Two hundred-and-thirty-six participants completed the follow-up questionnaire, representing 63% of the pre-workshop population. One-hundred-and-ninety-two (of the 236) participants completed the pre, post-workshop and follow-up CIQ with a 51.5% response rate for participants completing all three questionnaires. I administered the pre and post-workshop CIQ. However, I was dependent on educators involved in the study to administer the follow-up CIQ. Although the follow-up CIQ

were initially to be completed within 12 weeks of the workshop, this proved to be impractical for educators and as a consequence the follow-up CIQ's were completed between three and 16 weeks post-workshop. Several educators commented that their students' response rates were low as many of their students were on clinical placements (i.e., not attending class-room teaching sessions) when the follow-up CIQ's were administered. Educators from 13 of the 14 institutions returned follow-up CIQ's. Participants who completed one, two or three of the CIQ's were included in follow-up analyses (i.e., all participants were included in the CIQ follow-up analyses). The following chart summarises this.

Figure 3: Participants Completing the Pre-Workshop, Post-Workshop and Follow-Up Career Intentions Questionnaires (CIQ).



5.5.2 CIQ - Intentions to Work in child and adolescent mental health

The workshop had a positive impact on students' career intentions in relation to child and adolescent mental health but this was not sustained longer term (see Figure 4). A repeated measures analysis showed an overall time effect ($F_{2,546}$ = 16.29, p = <0.0001). Further investigation of this difference was carried out using a multiple comparison test (Scheffe test) which showed a highly significant increase in career intentions between time 1 and time 2, which dropped again between time 2 and time 3 with no change between time 1 and time 3 (see Table 8). There was no differential effect by students' professional group (p = 0.08), ethnicity (p = 0.6), gender (p = 0.75) or age (p = 0.26) (see Table 9). Figure 4 shows students' mean intentions (± 95% confidence intervals) to work in child and adolescent mental health, pre-workshop, post-workshop and at follow-up.

Table 8: Tests of Difference over Time for Intention to Work in child and adolescent mental health.

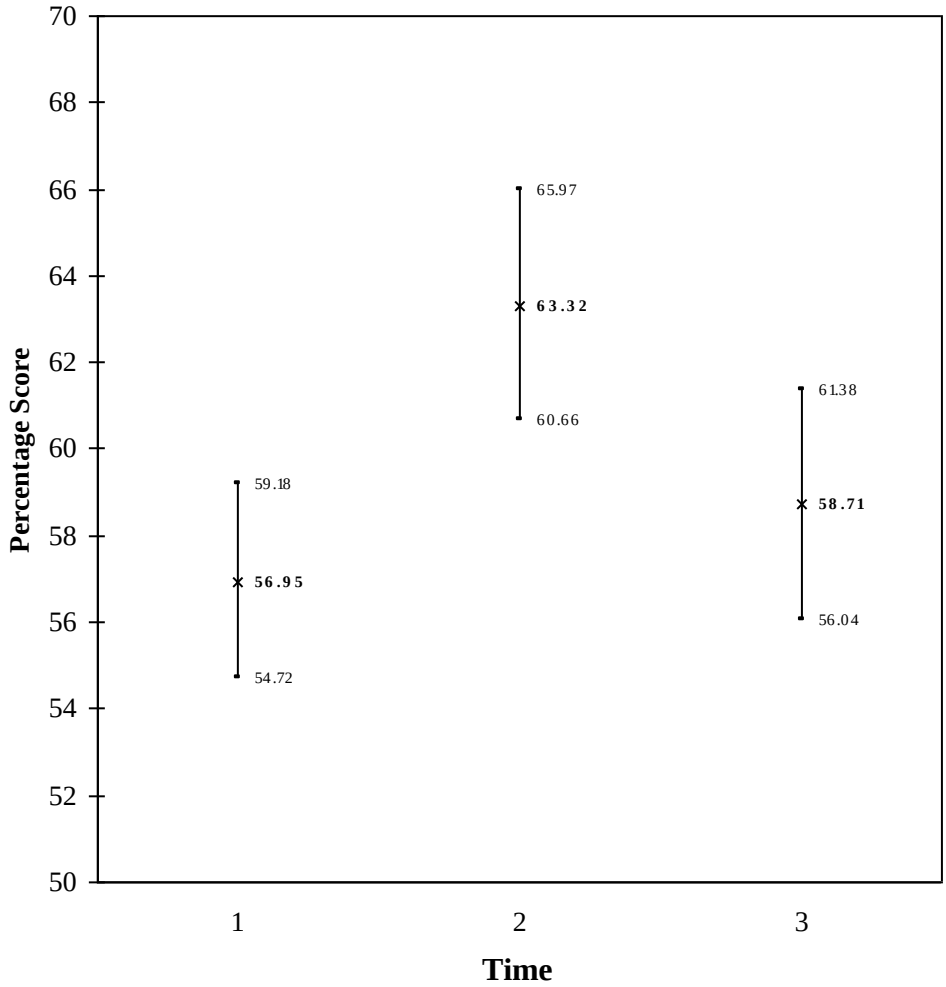
Time		Adjusted p-value
1	2	<0.0001
1	3	0.43
2	3	0.004

KEY
1 - Pre-Workshop
2 - Post-Workshop
3 – Follow-Up

Table 9: Tests of Fixed Effects for Intention to Work in child and adolescent mental health.

Effect	Numerator Degrees of Freedom	Denominator Degrees of Freedom	F Value	p-value
Age	1	365	1.28	0.26
Ethnicity	4	374	0.69	0.6
Profession	2	359	2.53	0.08
Gender	1	469	0.10	0.75
Time	2	546	16.29	<0.0001

Figure 4: Intention to Work in Child and Adolescent Mental Health Mean ± 95% Confidence Intervals.



1 = Pre-Workshop (n = 350)
2 = Post-Workshop (n = 336)
3 = Follow-Up (n = 211)

Working in child and adolescent mental health was also found to be consistently popular for a number of students. Seventy-three participants (20% of the pre-workshop participants) rated working in child and adolescent mental health very favourably (ratings of between 80 – 100). Of those 73 participants, 61 continued to rate the area very favourably over time, and a minority (n = 6) gave follow-up ratings of less than 80 (six participants only completed the pre-workshop questionnaire).

5.5.3 Intentions to Work with Older Adults

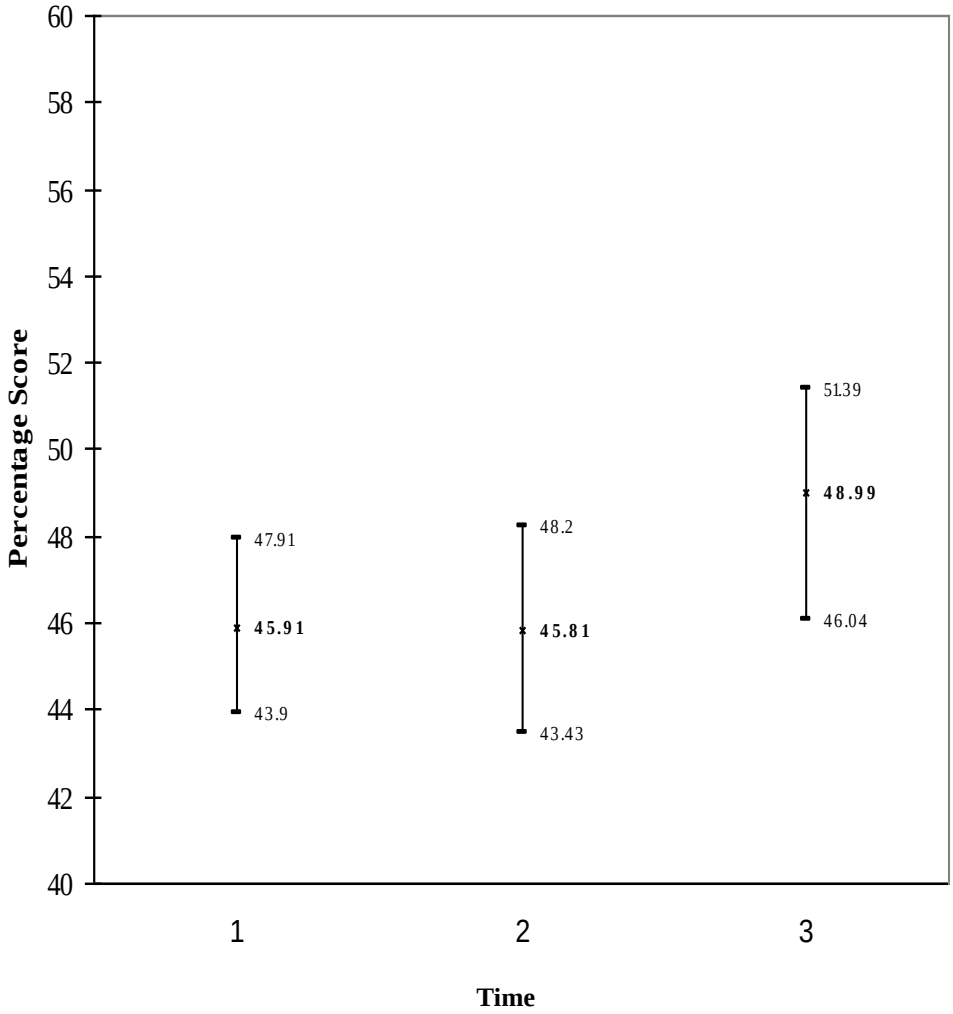
As expected there was no change in intentions to work with older adults after the workshop (i.e. between time 1 and 2) although repeated measures analysis showed an overall time effect for intentions to work with older adults ($F_{2,542} = 3.96$, $p = 0.02$) this was due to a change after the workshop (Table 10). Figure 5 shows students' mean intentions (± 95% confidence intervals) to work with older adults, pre-workshop, post-workshop and at follow-up.

Table 10: Tests of Difference over Time for Intention to Work with Older Adults

Time		Adjusted p-value
1	2	0.96
1	3	0.04
2	3	0.04

KEY
1 - Pre-Workshop
2 - Post-Workshop
3 – Follow-Up

Figure 5: Intention to Work with Older Adults
Mean ± 95% Confidence Intervals.



1 = Pre-Workshop (n = 350)
2 = Post-Workshop (n = 336)
3 = Follow-Up (n = 211)

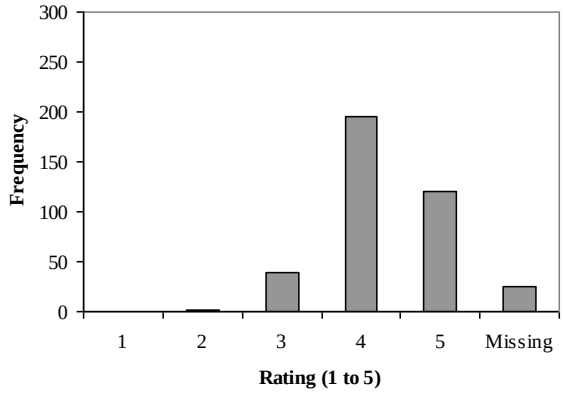
5.6 Quality of the Workshop

5.6.1 Quantitative Data – Quality of Teaching Questionnaire (Student Version)

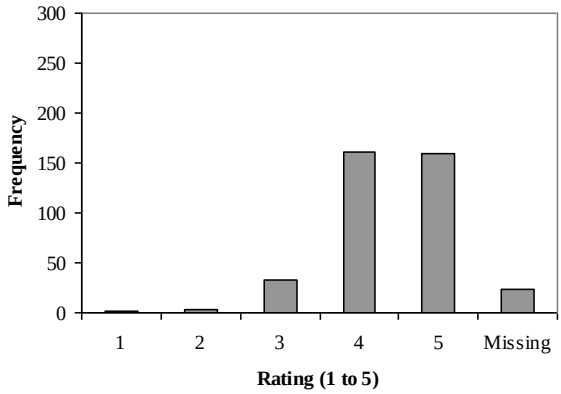
Of the participants who completed the QTQ-S, 236 were nursing students, 64 were occupational therapy students and 55 were social work students. Data is missing for between 22 and 25 students for each statement. The number of ratings across the twelve areas varied for two main reasons. First, some participants did not respond to some of the statements (for unknown reasons) and secondly some participants' ratings could not be scored and hence entered (for example, if a participant gave more than one rating). The median ratings for the 12 areas ranged from 4 to 5. Hence, all of the median ratings were between a 4 "agree" and 5 "strongly agree" (most favourable) rating. Three-hundred-and-twenty-eight participants responded to all 12 statements and their total score was out of a possible score of 60 (most favourable). The ratings for the workshop were extremely positive, with the average score out of 60 for nursing participants was 55, for occupational therapy participants was 53 and for social work participants was 54. A series of Kruskal Wallis Tests showed no significant associations between the total QTQ-S median scores and students' ethnicity (χ^2(df = 4) = 2.64, n =306, p = 0.6), professional group (χ^2(df = 2) = 2.39, n = 328, p = 0.3), age (χ^2(df = 2) = 1.48, n = 293, p = 0.5), or gender (χ^2(df = 1) = 0.20, , n =306, p = 0.7). Table 11 includes bar graphs of each of the 12 statements.

Table 11: Bar Graphs of the Results of the 12 Statements from the QTQ-S.

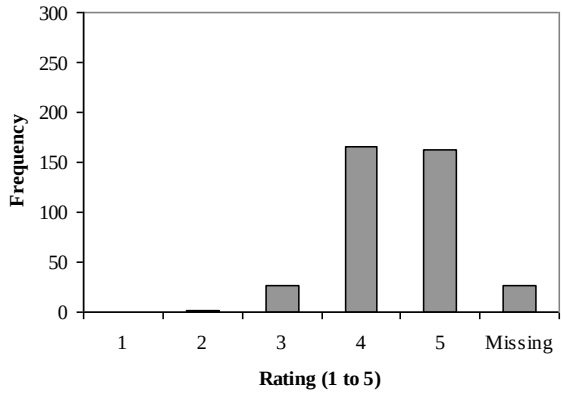
"The session helped motivate me to learn" (n =356)



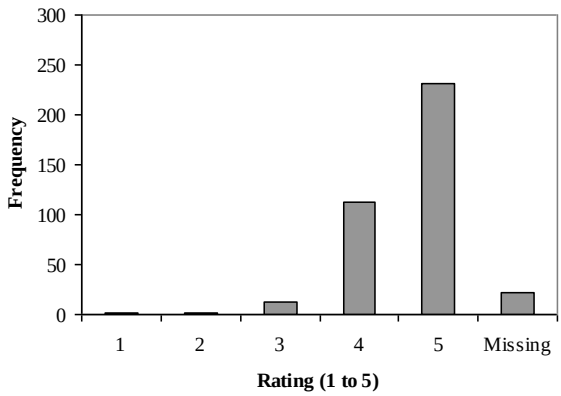
"I found the session intellectually stimulating" (n = 357)



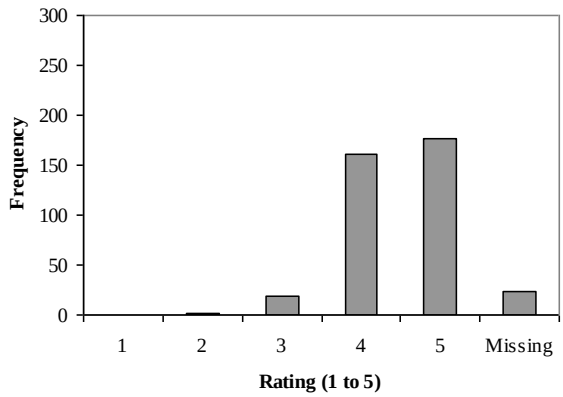
"The session helped deepen my understanding" (n = 355)



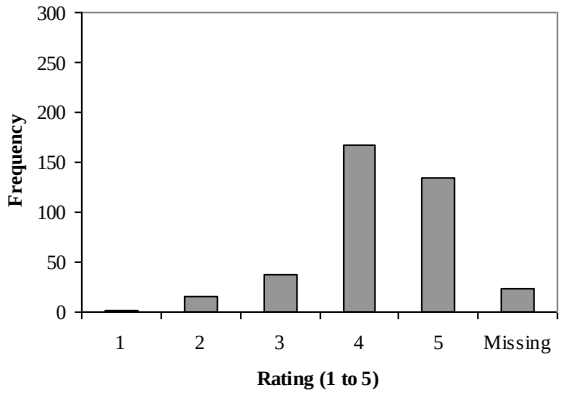
"The multi-media format of the session was effective" (n = 359)



"The objectives of the session were clearly explained" (n = 357)

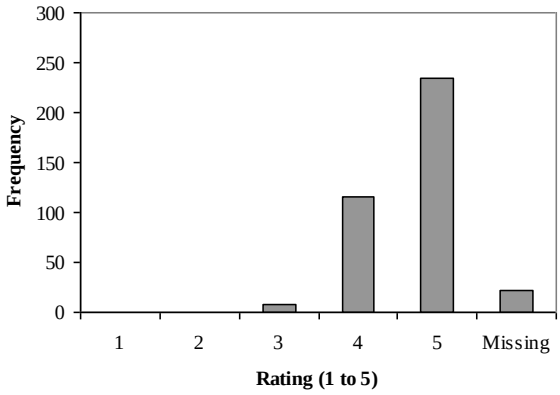


"The session progressed at the right pace" (n = 357)

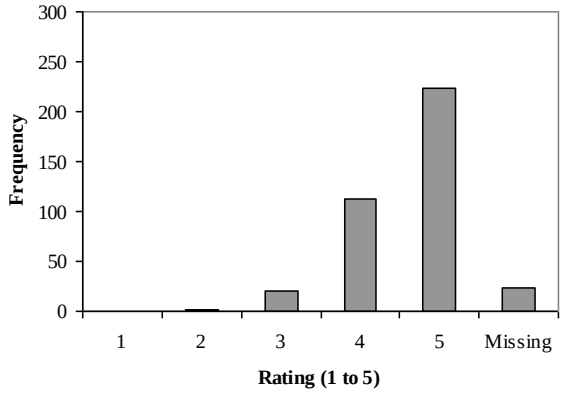


<u>Ratings</u> - 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

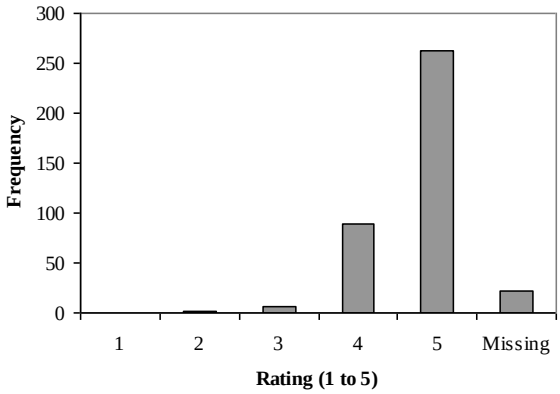
"The session was well organised" (n = 359)



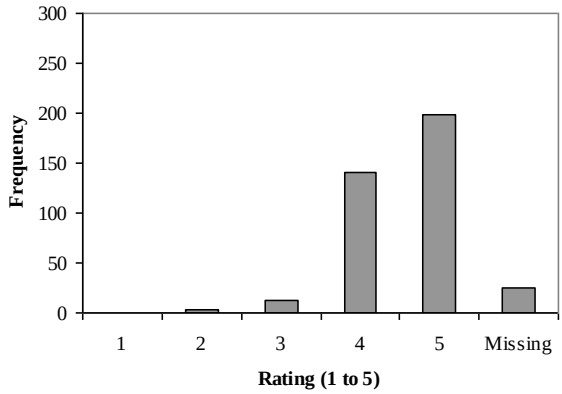
"The session was presented in an interesting manner" (n = 358)



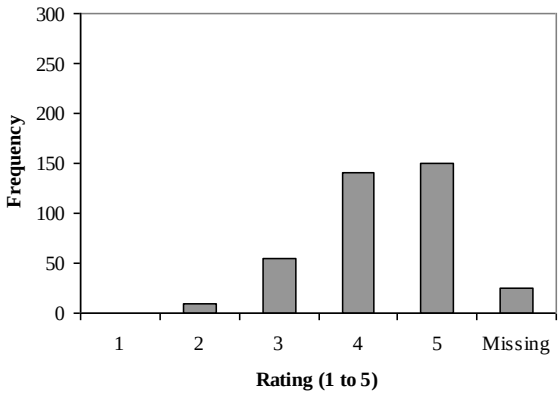
"Real-world examples were used effectively" (n = 359)



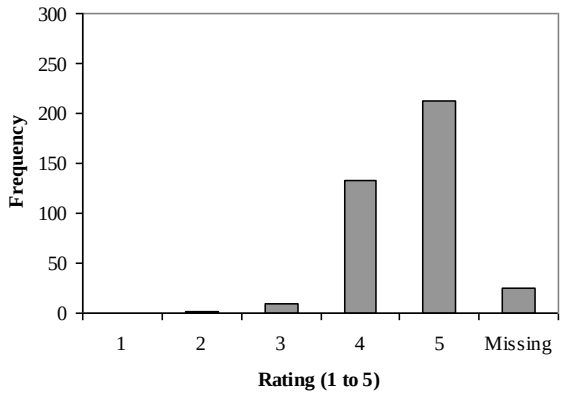
"I was satisfied with the quality of this session" (n = 356)



"My interest in the subject has increased as a consequence of this lecture" (n = 356)



"Students were encouraged to ask questions" (n = 356)



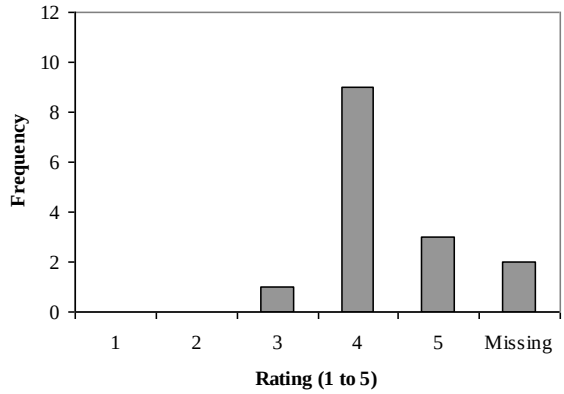
1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

5.6.2 Quantitative Data – Quality of Teaching Questionnaire (Educator Version)

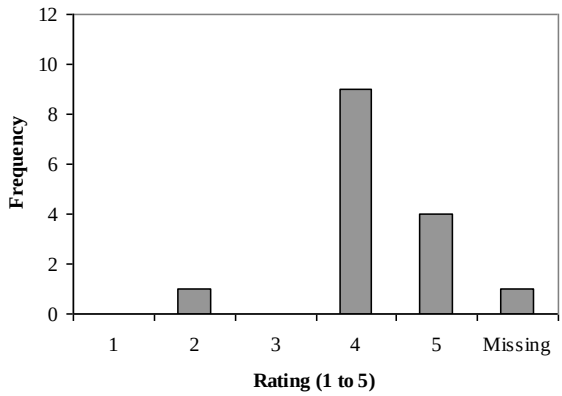
Fifteen educators (10 nursing, 2 occupational therapy and 3 social work educators) completed the QTQ-E. In twelve of the workshops one educator completed a QTQ-E, in one workshop (for nursing students) three educators completed the QTQ-E and in another workshop (for social work students) no educators were available to attend the workshop and complete the QTQ-E. Data is missing for between zero and two educators for each statement. The number of ratings across the thirteen areas varied because a number of participants did not respond to several statements (indicating these statements were 'N/A' or not applicable). The results of the quantitative data show that educators perceived that the workshop was of a very high quality (see Table 12). The median ratings for the twelve areas ranged from 4 to 5. For the extra statement ("I would like to see this session repeated next year") the median rating was 5. When the total scores (the sum of the 12 scores) are compared across student and educator participants, the results are very similar. The total score for educators out of 60 was 55.5 for the educators, compared to 55 for nursing students, 53 for occupational therapy students and 54 for social work students. A series of Mann-Whitney U Tests found that for eleven out of the twelve statements there were no significant differences between student and educator ratings, with the exception being statement four ("The multi-media format of the session was effective") when educators gave significantly lower ratings (Mann-Whitney $U = 1646$, $Z = -2.198$, $p = 0.028$). However if allowance is made for multiple testing this does not remain significant. Table 12 includes bar graphs of each of the 13 statements.

Table 12: Bar Graphs of the Results of the 13 Statements from the QTQ-E.

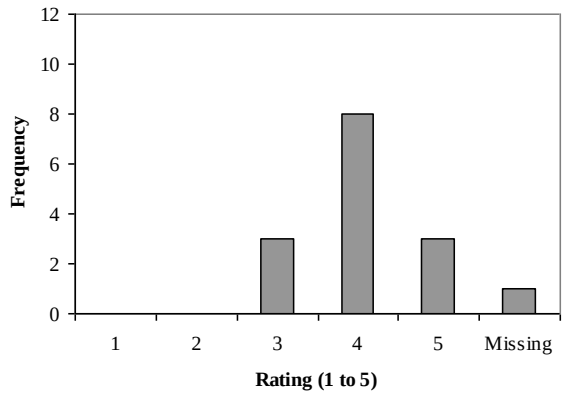
"The session helped motivate me to learn" (n = 13)



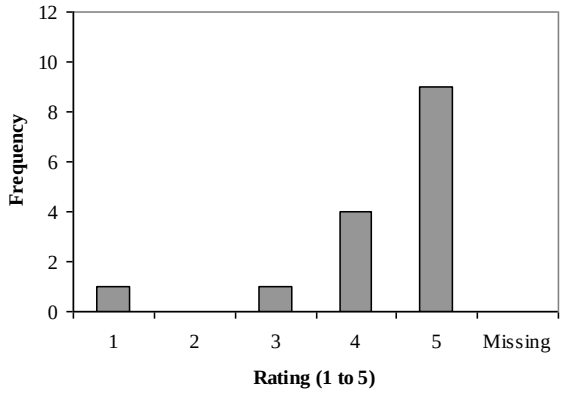
"I found the session intellectually stimulating" (n = 14)



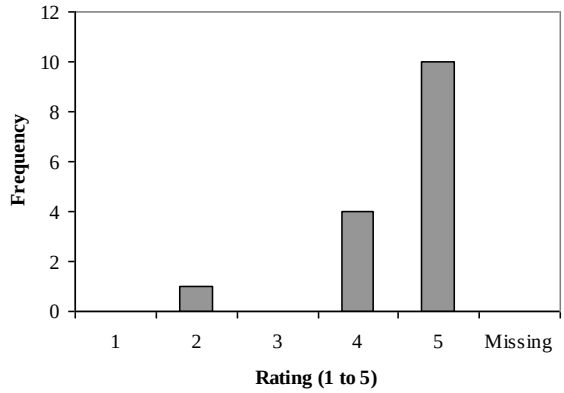
"The session helped deepen my understanding" (n = 14)



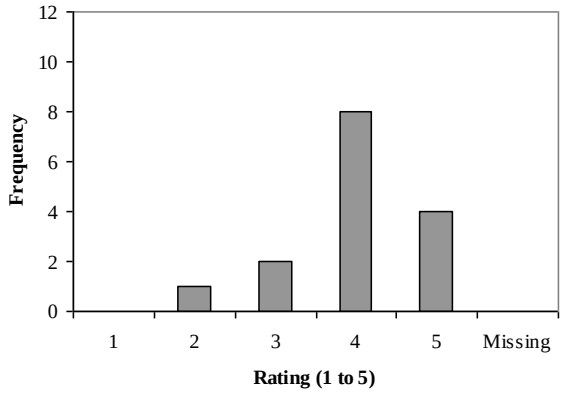
"The multi-media format of the session was effective" (n = 15)



"The objectives of the session were clearly explained" (n = 15)

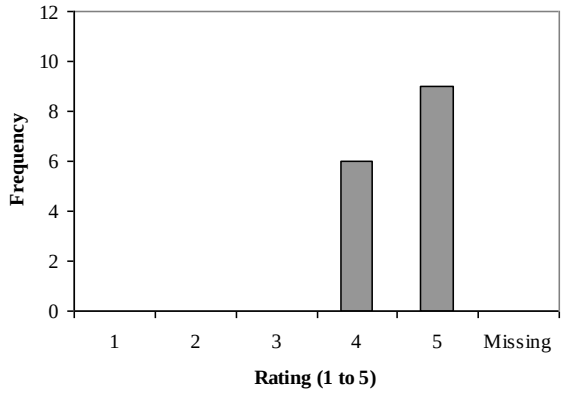


"The session progressed at the right pace" (n = 15)

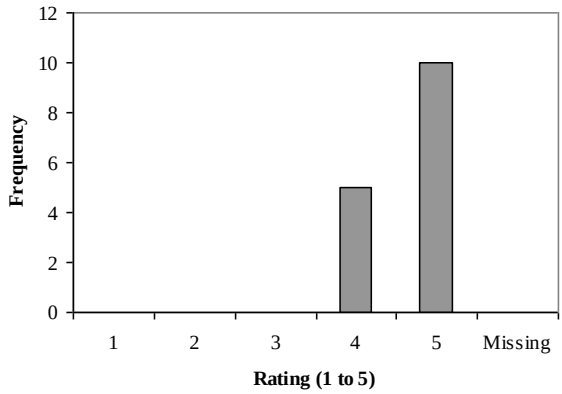


<u>Ratings</u> - 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

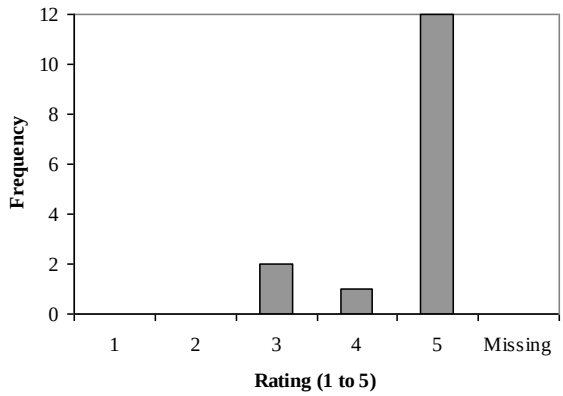
"The session was well organised" (n = 15)



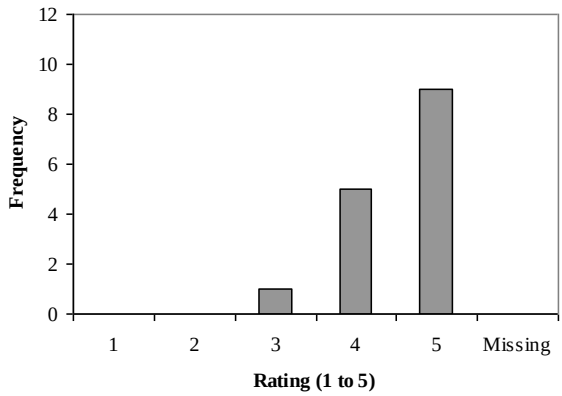
"The session was presented in an interesting manner" (n = 15)



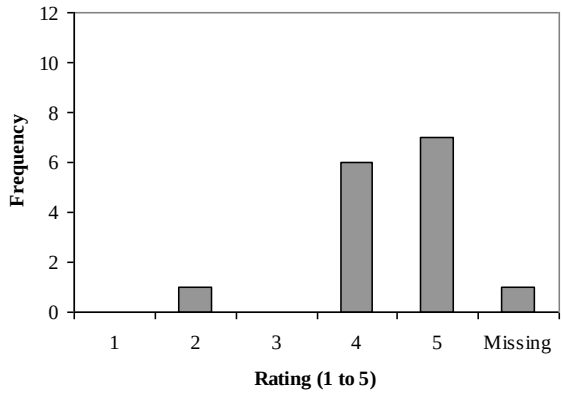
"Real-world examples were used effectively" (n = 15)



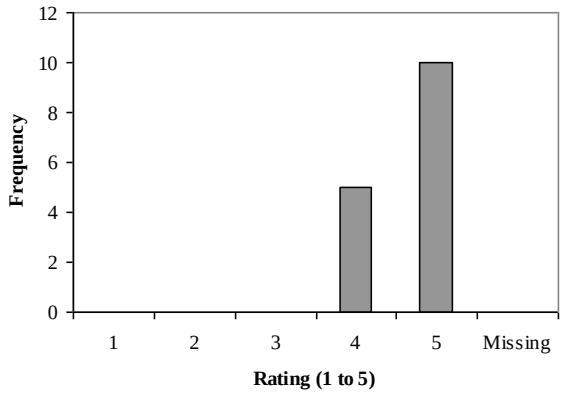
"I was satisfied with the quality of this session" (n = 15)



"My interest in the subject has increased as a consequence of this lecture" (n = 14)

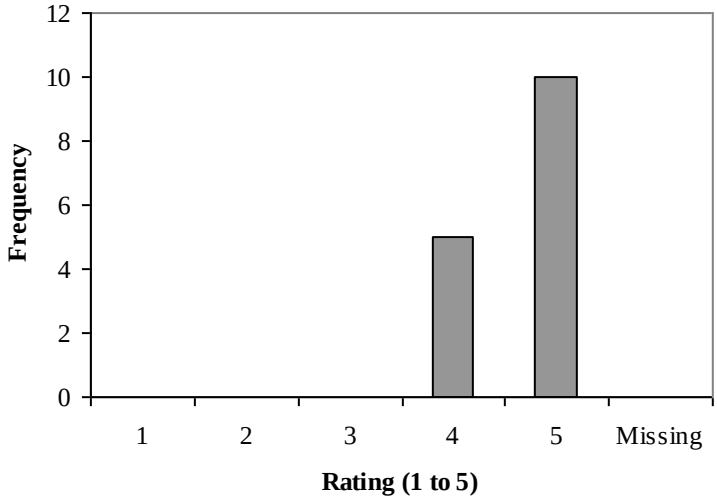


"Students were encouraged to ask questions" (n = 15)



<u>Ratings</u> - 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

"I would like to see this session repeated next year" (n = 15)



<u>Ratings</u> - 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

Chapter Six:
Results - Qualitative Results

Although the focus of this study was primarily quantitative some qualitative data were gathered and a broad thematic analysis was carried out.

6.1 Quality of the Workshop – Student Feedback

In analysing the students' qualitative data for the QTQ-S, seven common themes emerged for the question "What was most helpful for your learning?" Three common themes emerged for the question "What improvements would you like to see?" In addition, four themes emerged in relation to this question that appeared to be specific to the respondents' professions (i.e., "profession-specific"). As with the results of the students' quantitative data, their qualitative data was very positive in relation to the workshop and its quality.

The seven common themes (in descending order of how frequently they were reported) for "What was most helpful for your learning?" were:

1. Usefulness of the multi-media format of the workshop (n = 166)

   "It was good to have the videos to compliment what you were speaking about." [Occupational Therapy Student]

   "The mixture of visual and audio was fantastic." [Nursing Student]

   "Very professional, interactive, informative and interesting presentation! Excellent! Thank you. Demonstrations, video material – very helpful." [Social Work Student]

2. 'Real-world' examples were used effectively (n = 67)

   "Real life examples were really helpful." [Nursing Student]

   "Given the realistic examples both verbally and from the video clips." [Social Work Student]

3. Skill, knowledge and enthusiasm of the presenters (n = 42)

"Team effort – responses from different perspectives, engaging manner, the alternative treatments, talk therapy and common sense answers" [Social Work Student]

"Excellent explanations, enthusiasm for topic, fresh and intelligent delivery." [Nursing Student]

4. Interactive style or nature of the workshop (n = 39)

"Found the whole format very good – it was interactive and interesting and really increased my interest in this subject." [Nursing Student]

"Interactive scenarios i.e. – the match the meanings and clinical scenarios." [Nursing Student]

5. Increased knowledge achieved by attending the workshop (n = 33)

"Understanding of children/teens and their mental state and how the clinical assessment process is done." [Social Work Student]

"The assessment made me learn heaps – really enjoyed trying to work out what was wrong, the skills of the assessor also helped." [Nursing Student]

6. The benefit of being given a hand-out to write on (n = 22).

"Handouts made note-taking easier." [Nursing Student]

"NOT having to take notes was great (handouts are wonderful)." [Occupational Therapy Student]

7. Usefulness of revision (n = 9)

"Also good to be refreshed in stuff we'd learnt in first year (Piaget, Vygotsky etc)." [Occupational Therapy Student]

The three common themes (in descending order of how frequently they were reported) for "What improvements would you like to see?" were:

1. Forty-eight students commented on the pace and length of the workshop, the majority (n = 29) stated that the workshop was not long enough. However, six people felt that the workshop was too slow, seven thought it was too rushed, three students felt that the workshop was too long and three made other comments related to length and pace (for example "*was a good length and pace"*).

2. Changes to be made to the content of the workshop, such as additional content to be added (n = 13) or content to be re-emphasised (n = 10).

"More of cultural perspective – analyse with Western framework (how is it different/or do they connect in terms of theory)." [Social Work Student]

"Less focus on development/behaviour stages – more clinical simulations." [Nursing Student]

3. Timing of the workshop and break issues (n = 12)

"Although it was interesting, I started to drift off towards the end (maybe due to it being Friday afternoon)." [Occupational Therapy Student]

"Breaking it up more, can't concentrate for ages." [Nursing Student]

The four profession-specific themes for "What improvements would you like to see?" were:

1. A number of nursing students commented that they would have preferred increased discussion and/or interactivity in the workshop (n = 14)

"More audience participation – maybe a role play."

2. Two nursing students commented upon the hand-out and its lay-out, for example *"the handout was a little confusing."*

3. Some occupational therapy students noted that they would have liked some information on occupational therapy interventions in the area of child and adolescent mental health (n = 5)

"Discuss interventions OT would use – examples."

4. Five social work students commented upon the quality of the video and/or technology issues, for example *"have a video that doesn't shake."*

6.2 Quality of the Workshop – Educator Feedback

Five major themes emerged from the qualitative data provided by the educators for "What was most helpful for your learning?" and three emerged for "What improvements would you like to see?" As with the results of the educators' quantitative data, their qualitative data was very positive in relation to the workshop and its quality.

For "What was most helpful for your learning?" the themes were:

1. Usefulness of the multi-media format of the workshop (n = 6)

   "The video was excellent. Power-point presentation most professional. Attention to detail excellent." [Nursing Educator]

   "Video illustrations." [Social Work Educator]

2. Clinical examples and applications (n = 6)

   "Real world examples in discussion." [Occupational Therapy Educator]

   "…use of NZ context and understandings. Makes it all more grounded for students." [Nursing Educator]

3. Focusing on normal child development and then clinical issues (n = 4)

   "The beginning of the education session being about NORMAL mental health. Then looking at changes – problems." [Nursing Educator]

   "Revision of developmental concepts 1st – which provided foundation for subsequent discussion." [Nursing Educator]

4. Interactivity and discussion (n = 3)

   "Loved interactive style." [Nursing Educator]

5. Interactivity/discussions between presenters (n = 2)

   "Good interaction between presenters." [Nursing Educator]

For "what improvements would you like to see" the themes were:

1. Longer session (n = 7)

   "A little rushed – could probably do with another hour." [Nursing Educator]

"More time! This might allow for a lengthier time to address the clinical presentations and EBP[Evidence-Based Practice] aspects." [Social Work Educator]

2. Content to be re-emphasised (n = 3).

"Gloss over the first half of information as much more quick refresher. Then spend longer on second half and have time for the promotional video." [Nursing Educator]

"Perhaps a re-priority of the content to allow time for EBT [Evidence-Based Treatments]." [Occupational Therapy Educator].

3. Issues with the quality of the videos and technology (n = 2).

"Less dependence on technology would have made things smoother." [Social Work Educator]

Chapter Seven: CD-Rom Format of the Workshop

7.1 CD-Rom Format of the Workshop

The success of the workshop demonstrated a clear need for a national teaching resource in child and adolescent mental health. The resource needed to be sustainable, with the aim of increasing the teaching and profile of child and adolescent mental health in New Zealand. The development of this teaching resource was a secondary aim of the current study. This was consistent with Janet Peters' (2003) recommendations following her earlier findings that little training in the area of child and adolescent mental health was taking place within undergraduate nursing, occupational therapy and social work programmes.

The resource was to be used throughout the country for the three disciplines to help ensure that high quality teaching in the area could be continued once the study came to an end. It was clear that teaching had a positive impact on career intentions and the need for training in the area was on-going. The finished teaching resource was in CD-Rom format as the child and adolescent mental health workforce is often over-stretched and those with teaching experience are scarce. This meant that the already over-burdened child and adolescent mental health workforce would not face the additional demand of providing teaching throughout New Zealand.

Healthcare educators were interested in a CD-Rom based teaching resource, citing several reasons: many had no child and adolescent mental health experience (the majority had specialist adult psychiatry knowledge and skills); educators were keen to embrace quality multi-media technology-based learning; and educators were motivated to have a tangible resource that they could adapt and use in their teaching.

7.2 Development of the CD-Rom Format

The workshop content as described previously was adapted for the CD-Rom format. In conducting all 14 workshops I was able to evaluate how the content was received by educators and students, across disciplines and institutions, therefore establishing what

aspects of the content required adapting or improving before being used in the CD-Rom format. However, the difference in delivery style between the workshops and the CD-Rom was an issue that required considerable thought. The workshop was an interactive lecture with groups of students and the CD-Rom, once completed, was to be a self-directed learning tool, incorporated into various educational programmes by educators throughout New Zealand. Two strategies assisted in resolving this issue. First, a 'matrix format' was used to help prioritize the content that was to be used in the CD-Rom. This matrix meant that the teaching could be delivered according to the three sections: development, assessment and treatment – or across disorders: conduct disorder, psychosis, anxiety, depression and attention-deficit hyperactivity disorder. The matrix structure was thought to be especially relevant for the CD-Rom to allow for the greatest flexibility for educators adapting the resource to their curriculum.

Constructivist and engagement theories of learning (Steiner, 1997) lay behind the creation of the CD-based teaching resource. In developing the resource the educational technologist and I, took 'engagement' to simply mean active participation, rather than passive reception (avoiding a transmission mode of learning) (Doherty, 2004). We took 'construction' to mean that for learning to occur there must be an eventual dispositional change in the learner (Doherty, 2004). Therefore, in creating the learning material we were aiming for the acquisition and employment of knowledge, such that the learner's conceptual schema or world view changed as a result of the learning (Doherty, 2004).

7.3 Evaluation of the CD-Rom based Resource

The educational technologist and I used the workshop feedback to create a draft version of the teaching resource, which consisted of three CDs and a workbook. The draft teaching resource was then sent for comment to the external advisory group. The group members (which included three nursing, two social work and an occupational therapy educator) were sent a letter and a survey[22]. The survey covered three themes: aspects of the resource's content, aspects associated with the technology used and curriculum issues. For each of the three themes educators were asked to give feedback about the strengths of the resource and aspects that needed to be added or changed.

[22] Refer to Appendix K page 153 for a copy of the memo and survey form

Five of the six educators returned their completed survey forms. The occupational therapy educator stated that she was too busy to respond to the survey within the allocated time-frame (eight weeks). Overall, the educators' feedback was very positive and extremely useful in ensuring that the resource would be relevant and that the resource would be used within the intended professional groups once the project came to an end.

The advisors primarily wrote positive comments pertaining to the teaching resource. For example, all five educators identified various strengths to do with the resource's content:

> *"Current and up-to-date, good links to resources, clinical simulations very good." [Nursing Educator]*
>
> *"The material on the CDs looks really comprehensive and will be enormously helpful." [Nursing Educator]*
>
> *"Informative – relates normal development to abnormal experiences well and targeted at the right level." [Nursing Educator]*
>
> *"Clear lay-out, good balance of visual, written and interactive/video." [Social Work Educator]*
>
> *"I do like the photos. I also recognise the hard work that has gone into this, and continue to be interested in the final product as an additional resource for our students, particularly because of its local production/content." [Social Work Educator]*

The educators also highlighted certain strengths associated with technological aspects of the teaching resource:

> *"Format easy on the eye, very professional looking, logical progression." [Nursing Educator]*
>
> *"It really engages the student in a 'journey' of learning and discovery. I think it is great as it is." [Nursing Educator]*

Educators also concluded that the resource would be useful and could be adapted to their curricula.

> *"Fills a void and it is useful for self-directed learning." [Nursing Educator]*
>
> *"We haven't really had a resource that adequately covers this speciality area" [Nursing Educator]*

"It will serve to compliment, integrate and suggest new directions for teaching" [Social Work Educator]

"I don't perceive any difficulties as we have several computer suites with CD-Rom access." [Nursing Educator]

Two educators indicated that there were curriculum issues that would impact on the up-take of the teaching resource:

"Curriculum stretched, we only have a limited amount of time for mental health (2 weeks) and 160 hours for students on clinical placements [in mental health]" [Nursing Educator]

"I think the difficulties are ours, not yours, in that we do not have a discrete child and adolescent mental health section – having this resource, however, offers the opportunity to use it as a link between existing modules of child protection, trauma and mental health" [Social Work Educator]

The educators suggested four changes be made to the teaching resource and the educational technologist and I implemented all of these. The suggested changes were as follows:

1) Improving navigation within the CDs, as one educator commented, *"I found it a little difficult to navigate the pages because there was no 'next' button as such. Hence, I had to find my own way back and forth through the material rather than be guided through it" [Nursing Educator]*.
2) Reinforcing the importance of correctly installing the necessary software, as one educator had not done so, and as a result could not access all the video files, *"occasionally got a visual picture, usually (but not always) sound, but the visual sometimes did not move – static image only" [Social Work Educator]*.
3) Programming some self-test exercises into the teaching resource to allow for a range of student assessments, as one educator requested that, *"exercises [be] embedded within each module." [Nursing Educator]*.
4) Correcting referencing errors, as one educator commented, *"the citations and referencing are not readily checkable/not always there…" [Social Work Educator]*.

Two technology issues were raised by an educator that could not be addressed. For example, this educator could not install a piece of the necessary software (Flash Player), as this was blocked by computer security at her university. In addition, she requested

that a search function be added to the resource, *"I would like to be able to quickly search, using keywords, for topics of local interest such things as culture or ethnicity."* This was deemed unnecessary by the project's educational technologist, because the CD was not difficult to navigate and the project was not large enough to warrant a specialised search function.

Finally, an educator suggested that the resource be, *"utilised as it is and reviewed after a period of time with student feedback" [Nursing Educator]*. As a consequence of this comment and feedback from other key people, it was decided that the resource would be offered in the 2005 academic year as a 'sprint print' via Pearson Education New Zealand[23]. This would therefore allow for feedback from students and further suggestions from educators to be obtained early in 2005 and subsequent changes implemented before a full print-run.

[23] To view sample material from the teaching resource go to - http://www.pearsoned.co.nz/elearning/werrycentre/

Chapter Eight: Discussion

8.1 Statement of Principal Findings

- Immediately after students participated in the workshop their intentions to work in child and adolescent mental health increased significantly. This positive effect did not differ significantly according to profession, gender, ethnicity or age.

- Over time the positive effects of the workshop on students' career intentions in relation to child and adolescent mental health did not persist.

- The students and their educators were very positive about the workshop and its quality, as evidenced by the results of the QTQ-S and QTQ-E.

- All 15 educators involved in the study reported wanting the workshop session repeated in the next academic year.

- Preliminary feedback on the CD-based teaching resource was favourable.

8.2 Relevance of Current Study

This study of a broad cross-section of nursing, occupational therapy and social work students in seven cities across New Zealand has shown that a workshop on child and adolescent mental health led to a significant short-term increase in intentions to work in the area. Disappointingly, this effect did not persist over time. The study also established that a sizeable group of student participants consistently rated working in this area very favourably (very favourably = ratings over 80).

This sample of students is estimated to be equivalent to a third of the graduating cohort of nursing, occupational therapy and social work students in New Zealand in a given year. In addition, half of all the institutions that provide degree level programmes in nursing, occupational therapy and social work, and all of the occupational therapy education institutions, took part in this study. This study is of potential value to the

New Zealand health and education sector as it takes into account New Zealand's distinctive features, such as its unique ethnic composition and health and tertiary-education systems.

Despite the size of the combined workforce (and considerable student body) in nursing, occupational therapy and social work, very few studies have examined this group's career intentions. This study will contribute to the very limited research base in this area and could assist in identifying workforce issues for this group and highlighting aspects of this for further research.

8.3 Discussion of Findings

8.3.1 Design of the Study

The study was unique in that it investigated the career intentions of more than one professional group from various educational institutions and it showed that training can have a positive effect on students' career intentions. By contrast, related research to date has focused on only one health profession at a time (for example Alford et al., 2001; Bailey, 1990; Boughn, 2001; Brown, 1998; Christie, et al, 1985 and others), with a large number of the studies conducted in a single setting or educational institution[24]. This study has permitted comparisons to be made between the professional groups of nursing, occupational therapy and social work. This is relevant because although there is often a focus on generalist or generic mental health work, there are significant differences between these professional groups and their level of interest in working in child and adolescent mental health.

Conducting the CIQ at three points in time (pre-workshop, post-workshop and at follow-up) meant that patterns of change in career intentions over time could be investigated. A number of previous studies have only measured students' career intentions at one point in time (Alford et al., 2001; Boswell et al., 2003; Boughn, 2001; Doyle et al., 1998; Happell, 2001; Happell & Rushworth, 1999; Lewicki et al., 1999; Ohman et al., 2002; Ohman et al., 2001; Procter & Hafner, 1991; Stevens & Dulhunty, 1992, 1997; Taylor & Bergmann, 1987; White, 1999). Because this study involved measures over a 16-week time period and compared intentions to work in child and adolescent mental health with that of working with older adults, it was possible to

[24] Refer to studies marked with # in Table 1.

establish that the positive change in career intentions in child and adolescent mental health was not enduring. The finding that there was no change in intentions to work with the elderly (an area not discussed in the workshop) pre and post workshop also lends weight to the finding that the workshop had a positive influence on students' career intentions toward child and adolescent mental health.

8.3.2 Questionnaire Design

The design of the CIQ meant that students could endorse a range of preferences in relation to their career intentions. This is thought to be important as Wittman (1989) cautioned against thinking that students have only one career path in mind. Therefore, participants in this study were able to select more than one area of interest and then to express their level of interest in a continuous (as opposed to a categorical) manner. In several previous studies, by Stevens & Dulhunty (1992, 1997) and more recently by Happell (1998a, 2001) and Happell and Rushworth (1999), participants were required to rank practice areas in which they wanted to work after graduation. However, ranking areas in this manner does not allow for students to rate several areas of preference favourably (or not favourably) and more subtle variations in career intentions can not be measured.

8.3.3 Working in child and adolescent mental health

In addition to the positive change observed post-workshop in relation to working in child and adolescent mental health, a considerable number of students rated working in the area very favourably (very favourably = ratings of between 80 and 100) at all three points in time. These 61 students represented 26% of the follow-up group. This would be a pleasing number to service providers when one considers that District Health-Board Funded child and adolescent mental health services have approximately 400 full-time equivalent staff members. If half of these students came to work in the area it would potentially alleviate some of the sector's workforce pressures. It may be that, for a group of these students, the workshop highlighted that jobs are available in the sector and it is a desirable area to work in. For example, three social work students made comments in relation to the workshop and its impact upon their career intentions:

> *"I now know where I would like to be placed job wise." [Social Work Student]*

"The knowledge that there is a shortage of people in this field particularly when the majority of social work students I know/have been associated with, want to work with youth, yet don't seem to place themselves with youth in terms of mental health." [Social Work Student].

"To learn that social workers can work with adolescents in therapeutic programmes – as well as councillors [sic] and therapists." [Social Work Student]

In spite of the fact that some students rated working in child and adolescent mental health very favourably, it is unlikely that they will go on to obtain work in the area. Realistically, the people who make employment decisions in the sector wish to appoint nurses, occupational therapists and social workers with several years of post-qualification experience. Newly qualified comprehensively trained health professionals, with adequate support and training, should be able to work in the area. However, those who make the employment decisions want people with years of child and adolescent mental health experience. This is the 'catch-22' of workforce development in the area, as ideally there would be an abundance of people with this experience, but if students cannot get this via experience in undergraduate student placements or by obtaining work in the area upon qualification, it will be difficult for newly-qualified health professional to get into the area. Two nursing students alluded to these issues by suggesting that information about career pathways in mental health should have been offered as part of the workshop:

"More info about getting into MH [Mental Health] services and working there, what it's like etc. Career pathways within etc." [Nursing Student]

"…Maybe give info as to how we could look into a job in this area." [Nursing Student]

8.3.4 Measuring Career Intentions

Using VAS allowed for subtle variations and trends over time to be observed. These patterns might not have been observed had the students rated their career intentions with Likert Scales, as this form of measurement is less precise (Gift, 1989; McCormack et al., 1988; Pfennings et al., 1995). However, it is important to note that patterns that are statistically significant may not be practically meaningful. For example, pre-workshop nursing (54.96) and social work (55.48) participants rated working in child and adolescent mental health less favourably than occupational therapy participants (64.79), but these statistically significant differences might not have translated into

differences in job hunting activities or job choices between the three groups. Another issue of note is that some students simultaneously rated several VAS favourably, whilst others clearly rated only one area favourably. This highlights that the likelihood some students will be more flexible (and possibly more easily influenced) in relation to their job choices than others.

In the current study I aimed to establish whether a workshop (the exposure) positively influenced students' career intentions in relation to child and adolescent mental health. The study involved a large group of students, who would go on to become nurses, occupational therapists and social workers. One would assume that this group would already be predisposed to wanting to work in the area, as they had already chosen to train in 'helping professions'. However, the group was far from homogeneous, and therefore students were unlikely to all respond in the same way. Although I attempted to promote the area to a large group, it is unrealistic to think that every student would want to work in child and adolescent mental health. A large group of students would not want to work in mental health and/or with children and youth, irrespective of any teaching session they participated in. Additionally, child and adolescent mental health services only require a small number of the best suited of these students to eventually work in their services. Therefore, although I measured all of the students' career intentions, it may be that those students consistently interested in the area should be the focus of further workforce development research and support.

8.3.5 Quality of Teaching Questionnaire

The results of the QTQ-S and QTQ-E indicate that the workshops were very well received by both students and their educators. The collection of quantitative data allowed for comparisons to be made more easily across professional and other groups. It also allowed for comparisons to be made between student and educator participants. One statistically significant difference was observed between educators and students ratings, such that students rated "the multi-media format of the session was effective" more favourably than educators. However, caution is required in accepting the significance of this trend, due to the repeated nature of the Mann-Whitney U tests that were conducted for this piece of analysis.

The QTQ-S and QTQ-E data was helpful in identifying the strengths and weaknesses of the workshop from the students' and educators' perspectives. It was especially helpful

in informing the development of the CD-Rom based teaching resource. For example, students clearly valued: the multi-media format of the workshop, the use of 'real-world' and clinical examples, the workshop's interactivity, and being provided with written content. The CD-based teaching resource was then developed to include these positive aspects. The 'human side' of teaching was also highlighted as a positive aspect of the workshops, as students clearly valued the facilitators' enthusiasm and ability to respond to their questions. Unfortunately, the CD-Rom obviously could not incorporate this human aspect, which is a limitation of computer-assisted teaching.

8.3.6 Gender, Age and Ethnicity

The vast majority of participants in this study were female and this trend is consistent with that of overseas studies which have established that nursing, occupational therapy and social work are female-dominated professions (Brown, 1998; Muldoon & Reilly, 2003; Ozawa & Law, 1993).

The social work participants were on average almost a generation older than the occupational therapy participants. In addition, there were differences between the average nursing and occupational therapy participants' ages. This indicates that occupational therapy students are considerably younger coming into their professional training than social work students. The majority of occupational therapy participants were probably students at either tertiary or secondary-level institutions prior to commencing their training. Conversely, based on the average age of social work students, one could speculate that these students come into their training having previously worked in other, possibly related, areas. Of note, two social work students informed me that they already considered that they were social workers and they declined to participate in the career intentions research. This highlights differences between the ways in which these groups enter their profession. In order to be classified as a nurse or an occupational therapist one must complete entry-level training first, which is almost always three years of full-time study. However, in social work there are several methods of entry into the workforce and entry-level qualifications vary from a National Diploma in Social Work (Level 6) to a Master of Social Work (Applied) (Social Work Registration Board, 2004).

The majority of participants identified as being New Zealand European or Pakeha by ethnicity. The social work group was the most ethnically diverse and consisted of

almost equal numbers of Māori, Pacific and Pakeha students. Ethnic make-up varied between institutions and also between the North Island (ten participating institutions) and South Island (four participating institutions) programmes.

If child and adolescent mental health services seriously wish to expand upon and support diversity of staff, then it would be valuable to establish how social work programmes are able to attract more men, mature students and Māori and Pacific students. This may be to do with essential aspects of this profession. However, it might also be to do with social work already obtaining a 'critical mass' of diversity, which encourages and supports further diversity within the profession.

8.3.7 Profession-Specific Variations in Career Intentions

The occupational therapy participants rated working in child and adolescent mental health significantly more favourably than their nursing and social work counterparts. The popularity of working in this area could be due to the fact that an occupational therapy educator (in one of the two educational institutions) is a specialist in the area of child and adolescent mental health. However, there is also something inherently popular about working with children and adolescents. For example, prior to the commencement of the workshops participants rated working with children and adolescents more favourably when compared to working with the elderly.

8.3.8 The Stigma of Mental Illness & its Influence on Career Intentions

Of note, there was considerably more interest in working with children and adolescents than in working in child and adolescent mental health. This pattern is consistent with the findings of Penny (2001) and Philipps et al. (1997) which showed that negative attitudes toward mental illness are prevalent among many health care students, including those in nursing, occupational therapy and medicine. In addition, even if these negative views changed during students' training, as was the case in a previous study of nursing students, it did not necessarily mean that they viewed working in the area more favourably (Stevens & Dulhunty, 1997).

8.3.9 Factors Influencing Job Choice

Students consistently rated several areas as being positive in relation to job choice or selection. Not surprisingly, the factor most often rated as positive was job satisfaction. Personal interest in an area/speciality was also frequently rated as positive. This

finding is consistent with research in the area of vocational psychology, where personal interest is strongly predictive of job choice and subsequent satisfaction (Tracey & Hopkins, 2001). These patterns would indicate that those students with a personal interest in child and adolescent mental health are the most likely to want a job in the area. In addition, students were keen to have a job with supports available, indicating that the workforce could make the area more appealing by ensuring that new graduates receive the necessary structured supervision and support that they desire (and require) and this would go some of the way toward making the area even more appealing. The vast majority of students rated being able to help people or groups of people as a positive job choice factor. This is a logical trend as these students are training to be 'helping professionals' and this altruism was probably an influence in their initial decision to train as nurses, occupational therapists and social workers.

Students consistently rated 'professional development and progression opportunities' and 'a job with generous pay' as positive influences in job choice. Unfortunately, nursing, occupational therapy and social work are rewarded with comparatively low pay and there are relatively few advanced roles and/or career pathways available to nurses and allied health professionals. In comparison the career pathways for medical practitioners tend to be well developed, with structured training and professional pathways.

One area rated as being a negative factor by over one-third of students was a 'high pressure job'. Ironically, although a sizable group of students rated this factor unfavourably, working in the health and disability sector is often stressful, with considerable responsibilities, and can involve managing risk. These factors apply to work in child and adolescent mental health, but also in many other areas of health-related work.

8.4 Limitations of the Study

8.4.1 Recruitment Bias

The current study consisted of a large cross-section of nursing, occupational therapy and social work students, however some caution is required when generalising the results of the study for three main reasons. First, institutions involved in the study varied considerably in terms of their size and the demographic composition of their

students. Secondly, it was not possible to establish how similar or dissimilar the study group was to the overall student population. Non-participating educational institutions may have been different from the participating institutions, and as a result students from non-participating institutions may have been more or less interested in child and adolescent mental health as a field. Thirdly, there was a no-response bias of 20% pre-workshop (absent students) and 63% of pre-workshop students completed the follow-up questionnaire, meaning that 37% did not. However, 93% of participants completed the post-workshop CIQ, and this represents an excellent response rate. In addition, not all of the students who participated completed every question in all four questionnaires (three CIQ and the QTQ-S).

8.4.2 Non-Participants

I endeavoured to conduct as many workshops as possible, and hence to recruit the largest possible number of educational institutions (and student participants) for this study. Three main factors seemed to have a positive influence on the recruitment of educational institutions: the workshops were free of charge; the workshops were designed for undergraduate students; and, the workshops were facilitated by people with specialist skills and knowledge in the area of child and adolescent mental health. Conversely, two main barriers restricted me in the recruitment of educational institutions: undergraduate programmes in nursing, occupational therapy and social work are broad-based and there is generally insufficient time for detailed coverage of speciality topics; and, recruitment of educational institutions depended upon educators within the programme being interested in the areas of mental health and/or child/youth health.

Fourteen of the 28 institutions approached took part in this study, representing half of all the eligible programmes. When I contacted non-participating institutions it appeared that social work educators were less enthusiastic about the workshop than nursing and occupational therapy educators. This may be a consequence of philosophical differences between medical/healthcare and social practice/social policy education. It was not possible to obtain information about the student demographics from non-participating institutions. Therefore, I could not establish whether the current study group was a representative sample of undergraduate nursing, occupational therapy and

social work students in New Zealand. This limitation has implications for the generalisability of findings.

The 80% attendance rate of timetabled students was pleasing. Attendance at time-tabled classes for undergraduate students varies considerably, usually with the highest attendance rates reserved for compulsory or examined classes. It is possible that for the 20% of non-attendees, attending a workshop in child and adolescent mental health was not their highest priority as they were not interested in the topic and would not want to work in the area. It is also possible that the majority of these non-attending students had poor class attendance rates overall. When I asked an educator if there were any differences between those students in attendance and those students that were absence, she replied, *"no the ones that are here are the ones that are always here [attending lectures]." [Nursing Educator]*

The 93% response rate for students' post-workshop questionnaires was an extremely good response. The main reason for this was that the questionnaires were administered directly after the workshop and the students were a 'captive audience'. The follow-up rate of 63% was also pleasing, as these questionnaires were administered by educators, mostly in time-tabled classes, and posted back to me. A large number of students were on placement during follow-up and contacting them was not possible. An improved follow-up rate could have been achieved if fewer of the students had been on placement. Educators reported that students on placement who were able to be contacted required considerable prompting to return their questionnaires. Altering the timing of the administration of the follow-up questionnaires is unlikely to have had an impact, as students in their final year of training have many hours on clinical placement spread throughout the year. As the non-responders to the follow-up questionnaires tended to be students on placement, it is unlikely that these student participants differed significantly from the students that did complete follow-up questionnaires as placement timing is a random factor.

8.4.3 Limitations of the Questionnaires

The CIQ, QTQ-S and QTQ-E were specifically developed for the current study as no established questionnaires with proven validity and reliability were available. Like the vast majority of previous research in the field my questionnaires lacked evidence of their reliability and validity (Alford et al., 2001; Bailey, 1990; Boswell, 2003; Boughn,

2001; Brown, 1998; Christie et al., 1985; Craik et al., 2001; Doyle et al., 1998; Faleafā, 2003; Ferguson, 1998; Fleming et al., 1997; Happell, 1998a, 2001; Happell & Rushworth, 1999; Hemopo, 2004; Lambie & Stewart, 2003; Lewicki et al., 1999; McKenna et al., 2001; Muldoon & Reilly, 2003; Ohman et al., 2001, 2002; Peters, 2003; Philipps et al., 1997; Pye & Whyte, 1996; Schnuth et al., 2003; Showers, 1992; Stevens & Dulhunty, 1992, 1997; Taylor & Bergmann, 1987; van Heugten & Rathgen, 2003; Wells et al., 2000).

A limitation of developing new questionnaires is that these instruments do not have empirical evidence to support their effectiveness. However, in the current study every available step was taken to ensure the questionnaires were refined, improved and tested before their eventual use. For example, they were reviewed by a biostatistician and other key people before being piloted, refined, and finally utilised.

8.4.5 Factors Not Investigated

The study could not investigate students' career intentions in relation to all the potential practice areas available to nurses, occupational therapists and social workers. Nor did it study other influences on career intentions highlighted in previous research such as the impact of: clinical placements (Ferguson, 1998; van Heugten & Rathgen, 2003; McGhee, 1987; Paul, 1996; Pye & Whyte, 1996; Showers, 1992; Stevens & Dulhunty, 1997; White, 1999), clinicians on placement and their influence (McKenna et al., 2001), job availability upon graduation (McKenna et al., 2001), particular clients students met whilst on placement (McKenna et al., 2001), or the impact of educators within the students' institutions (McKenna et al., 2001).

The study did not measure actual job choice, but rather students' career intentions. Job choice is an issue that requires further study. As Ohman et al.'s (2001) study of physiotherapists showed, students' pre-graduation expectations may not accurately reflect the realities of the subsequent work environment. Although it would seem that career intentions would be directly related to job choice, for a wide variety of reasons they may not be. For example, anecdotal evidence in specialist mental health services suggests that employers are reluctant to appoint new graduates, even if these new graduates are extremely interested in working in the area.

8.5 Implications of Findings

8.5.1 Barriers to Solving the Workforce Issues

From the employers' perspective, new graduates may not be seen as fully capable of conducting the work that they are required to complete in child and adolescent mental health. Employers would, of course, desire employees with the best possible qualifications and experience, but this is not always possible. This study highlights that there is some interest in the area at an undergraduate level, but unfortunately students may find it difficult to obtain related work in the area, because employers prefer those already experienced in the area and there are no clear pathways into the workforce. The Mental Health Commission (2004) has suggested in its most recent review of the *Blueprint* that the solutions to the current workforce shortages in mental health *"must include increasing numbers in training and must also include looking after the workforce we have got"* (p. 6).

Workforce issues for child and adolescent mental health are likely comparable to other areas of the health and disability sector. An additional on going problem for nursing, occupational therapy and social work is a lack of career pathways post-qualifying. For example, educators involved in this study highlighted that career opportunities and pathways were not often well developed for their new graduates.

8.5.2 Recommendations – Further Training

A potential solution to the current workforce shortage, proposed by staff at the Werry Centre, could involve further training following graduation from general comprehensive programmes of study. One specific proposal suggests that a child and adolescent mental health new-graduate programme be established to increase specialist skills. This should have the effect of increasing employers' confidence in, and therefore likelihood of employing newly qualified nurses, occupational therapists and social workers. Such a programme would involve a reduced case-load, intensive supervision and structured learning. The structured learning could take the form of a course of study such as a Post-Graduate Certificate in child and adolescent mental health, which is offered throughout the country by the University of Auckland (distance-based learning), University of Otago (in Wellington and Christchurch), and the Otago Polytechnic and the University of Otago conjointly programme in Dunedin. This would be completed in the graduates' first professional year, thus allowing them to

successfully make the transition from student to a professional, whilst simultaneously developing a specialisation in child and adolescent mental health.

A second solution could be prioritised placements for students already interested in the child and adolescent mental health area, so that they are given the opportunity to gain supervised experience in the area. Several factors could impact on the success of such a strategy. In particular, the educational institutions that train these students are primarily focused on ensuring students receive comprehensive high-quality education and workforce development issues would need to be secondary to this. In addition, there is a shortage of available placements in child and adolescent mental health. One nursing educator from a regional centre involved in this study described a common issue whereby interested students were unable to obtain child and adolescent mental health placements. This was because of chronic staff shortages in the area meaning that no-one was available to supervise student nurses and hence no placements were offered.

8.5.3 Recommendations – Further Research

It would be worthwhile to establish whether certain groups within this student population are more open to change in relation to their career intentions, as some participants appeared to rate several areas very favourably whilst others rated only one area favourably. In particular, it would be useful to establish whether or not there is a correlation between life experience prior to training and increased clarity about career preferences upon qualifying, as one would assume that the social work participants, having had more experience in the workforce, would not be as easily influenced in relation to their career intentions compared to younger participants.

The workshops' positive influence on students' career intentions was not enduring and it would be worthwhile to establish ways to remedy this. Perhaps students require more exposure to child and adolescent mental health, rather than a single workshop, as it is possible that child and adolescent mental health would be less easily forgotten if the teaching was spread over a longer period of time. The CD-Rom based teaching resource will allow for teaching to be spread over a longer period and it will be interesting to see if this prolongs the positive effects of teaching on career intentions. The impact of this teaching resource on students' career intentions over time is worth further investigation. Perhaps formal assessment on child and adolescent mental health

may increase students' motivation to learn about the area, and this in turn may also result in enduring positive career intentions toward child and adolescent mental health.

In the current study students' career intentions were studied over a four-month period, but in order to establish a more comprehensive understanding of students/new graduates and their career intentions (and subsequent job choices) a longitudinal study covering a greater period of time would be required.

Chapter Nine: Conclusions

There is a need for more research in the area of nursing, occupational therapy and social work students' career intentions and associated job choices. It is worrying that there is such a shortage of suitable health professionals available to work in child and adolescent mental health. However, many areas within the health and disability sector face chronic recruitment and retention issues. Of particular concern, are the probable gaps between students' intentions (and possible expectations) and what the workforce market has to offer.

This study highlights that there is interest in working in child and adolescent mental health and attendance at the workshop was found to significantly positively impact upon students' intentions to work in child and adolescent mental health. In addition, a sub-group of students rated working in the area of child and adolescent mental health very favourably at all three points in time.

The CD-based teaching resource was created to ensure that teaching in the area continues and this resource has been well received by a group of external advisors. However, the impact of this resource requires further study. In addition, key stake-holders need to capitalise on the interest generated by the workshops and teaching resource to the benefit of the workforce and child and adolescent mental health in New Zealand. The differences between intentions to work in child and adolescent mental health across each of the professional groups could be further explored, especially if the area wishes to attract a number of the Māori or Pacific social work graduates.

Unfortunately, the students who rated working in the area of child and adolescent mental health very favourably are unlikely to obtain work in this area. As highlighted in the Discussion chapter, there is a dire need to implement a strategy such as a new-graduate career pathway into the area. It is unrealistic to think that the current workforce shortages will be met by professionals who already have the experience that employers desire. Hence, a programme that trains and supports new graduates in the

area would help to address this issue. In addition to this, more student placements should be offered to increase targeted students exposure to the area. Both of these solutions require additional resources and the commitment of both the health and education systems in order to solve the problem, but this should not be too much to ask as the benefits for child and adolescent mental health should greatly outweigh the cost and effort expended.

Consistent with previous studies, the current study showed that teaching experiences have an impact on career intentions, that job attributes have an impact upon career intentions, that career intentions can change over the course of training and that working with children and adolescents is seen as a popular area amongst health-care students. Building upon the findings of previous studies, the current study demonstrated that teaching did have a positive impact on career intentions.

This study provided a logical first step in increasing staff levels in child and adolescent mental health. It delivered positive training experiences in a systematic way and developed a method of sustaining this teaching in CD-Rom format, although some further thought is needed to establish how teaching can sustain positive career intentions in relation to child and adolescent mental health.

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APPENDICES

Appendix A

- Career Intentions Questionnaire (CIQ)

Appendix B

- Quality of Teaching Questionnaire, Student and Educator Versions (QTQ-S and QTQ-E)

Appendix C

- Memo and Feedback Survey from Child and Adolescent Mental Health Staff -

Appendix D

- Mental Health Consumer Scenario-Based Survey-

Appendix E

- Information Sheet – Parents involved in the Development Section -

Appendix F

- Information Sheet – Parents, Actors & Clinicians Involved in Simulations -

Appendix G

-University of Auckland Human Participants Ethics Committee Approval -

Appendix H

- Information Sheets (Heads of Department, Educators and Students) -

Appendix I

- Consent Form (Heads of Department and Educators) -

Appendix J

- Letter to Heads of Department Introducing the Project -

Appendix K

- Memo and Survey Form Regarding the Draft of the CD-Based Teaching Resource -